

52



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/487,526	06/07/1995	JOHN C. HARVEY	5634.355	7792

21967 7590 04/28/2004

HUNTON & WILLIAMS LLP
INTELLECTUAL PROPERTY DEPARTMENT
1900 K STREET, N.W.
SUITE 1200
WASHINGTON, DC 20006-1109

EXAMINER

HARVEY, DAVID E

ART UNIT	PAPER NUMBER
----------	--------------

2614

DATE MAILED: 04/28/2004

46

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

08/487,526

Applicant(s)

HARVEY ET AL.

Examiner

DAVID E HARVEY

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-18,20-30,33-42 and 67-104 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-18,20-30,33-42 and 67-104 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

A. INTRODUCTION:

A-1) The Continuation-In-Part ("CIP") Designation:

All continuation-in-part (CIP) applications are not "true" continuations.

A true CIP application is one that describes and claims subject matter previously described in an earlier filed co-pending application and, being such, the claims of a "true" CIP are entitled to the effective filing date of the parent application. In contrast, applications that include the "CIP" designation but comprise claims having limitations directed to "new" subject matter that has been added via the filing of the alleged CIP application are not "true" continuations and, therefor, are not entitled to the earlier effective filing date.

"Thus, if an application is, in fact, a true continuation application, it is entitled to the filing date of the original parent application. If, however, it discloses and claims subject matter not common to or not supported by the parent application, it is not a true continuation application and any claims therein that include new matter are only entitled to the actual filing date of the later-filed application, and not the earlier parent application" (emphasis added)

[Reynolds Metals Company v. The Continental Group, Inc., (DC NIII), 210 USPQ 911 at 929]

Thus the "CIP" designation, itself, does not validate a claim for section 120 priority. That is, beyond the formal requirements, the CIP designation only indicates that insofar as the subject matter from the alleged parent application has actually been carried forward from the parent application into the CIP application, applicant is entitled to the earlier filing date of the parent application for claims that are directed *solely* to the subject matter which has been carried forward (i.e. for claims that are directed to "common subject matter").

"However, as mentioned earlier, a continuing application is entitled to rely on the earlier filing date of an earlier application only with respect to subject matter common to both applications" (emphasis added)

[In *Transco Products, Inc., v. Performance Contracting, Inc.*, 32 USPQ2d 1077 (**18)]

"Any claim in a continuation-in-part application that is directed solely to subject matter adequately disclosed under 35 U.S.C. 112 in the parent application is entitled to the filing date of the parent application." (emphasis added)

[In *Transco Products, Inc., v. Performance Contracting, Inc.*, 32 USPQ2d 1077 (**18)]

"Section 120 merely provides mechanism whereby application becomes entitled to benefit of filing date of earlier application disclosing same subject matter; common subject matter must be disclosed in both applications, either specifically or by express incorporation by reference of prior disclosed subject matter"

[Dart Industries, Inc. v. Banner, Commissioner of Patents and Trademarks, (CA DC), 207 USPQ 273]

More important than what the CIP designation indicates, is what the CIP designation does not indicate:

- 1) The CIP designation is not an "*Incorporation by Reference*". To be entitled to section 120 priority, the subject matter that is to be claimed in the CIP application must be formally carried forward into the CIP from the earlier filed parent application. That is, the

subject matter that is to be claimed must be carried forward into the CIP disclosure either by:

- 1) A formal "Incorporation by Reference" of the subject matter that is to be carried forward from the parent; or
- 2) "Specific" physical descriptions of said subject matter that is to be carried forward from the parent; and

"Applicant is confusing two distinctly different things:

(1) The right to have benefit of the filing date of an earlier application under § 120 for subject matter claimed in the later application because that subject matter is *disclosed in an earlier application* to which a 'specific reference' is made - i.e., a reference to the earlier application per se, and

(2) The incorporation *by reference* in an application of matter elsewhere written down (not necessarily in a patent application), for economy, amplification, or clarity of exposition, by means of an incorporating statement clearly identifying the subject matter which is incorporated and where it is to be found"

[In re DE SEVERERSKY, 177 USPQ 146 (CCPA 1973)]

"Statement in application that it is 'continuation-in-part' of prior application is insufficient to incorporate therein any part of prior application; all that it means is that insofar as disclosure of application finds corresponding disclosure in prior application, the application is entitled to filing date of prior application"

[In re DE SEVERERSKY, 177 USPQ 144 (CCPA 1973)]

2) "CIP" practice does not permit an applicant to add "new matter" which alters or expands the substance of the subject matter that was disclosed in the parent application, while preserving the earlier filing date of the parent application for claims in the CIP application that recite the altered/expanded subject matter of the CIP.

"In 1967, the Court of Custom and Patent Appeals first separated a new written description (WD) requirement from the enablement requirement of [Section] 112. The reason for this new judge-made doctrine needs some explanation. Every patent system must have some provision to prevent applicants from using the amendment process to update their disclosures (claims or specification) during their pendency before the patent office. Otherwise applicants could add new matter to their disclosures and date them back to their original filing date, thus defeating accurate accounting of the priority of invention."

[Enzo Biochem Inc. v. Gen-Probe Inc. 63 USPQ2d 1618,1624 (CA FC 2002)]

“[Section 120] contains no magical disclosure -- augmenting powers able to pierce new matter barriers; therefor, it cannot “limit” absolute and express prohibitions against new matter contained in Section 251.”

[Dart Industries, Inc. v. Banner, Commissioner of Patents and Trademarks, (CA DC), 207 USPQ 273]

“A continuation-in-part application is not entitled to the benefit of the earlier filing date of its parent application where the changes included within subsequent applications are ‘new matter’ which either alters the substance of the invention or makes the composition an invention for the first time”

[Indiana General Corp. v. Krystinel Corp., 161 USPQ 82, 94-95]

“To the extent that a CIP application adds new matter, claims that are dependent upon the new matter are entitled to the filing date of the CIP only and not that of the parent application”

[Stern v. Superior Distributing Company et al., (CA 6), 215 USPQ 1089 at 1094]

“Unlike the enablement provision of section 112, where the disclosure of a single species might be sufficient to enable a practitioner skilled in the art to make and use any member of the genus,....., the written description requirement of section 112 requires more. See Vas - Cath, supra. This strict reading of the written description requirement prevents an inventor from surreptitiously expanding a patent through successive continuation-in-parts.

See id. At 1562. Essentially, it limits the claims of an applicant to those inventions he clearly discloses, either expressly or inherently” (emphasis added)

[Tronzo v. Biomet Inc. (DC SFla) 41 USPQ2d 1403 ¹ citing Vas-Cath Inc. v. Mahurkar (CA FC) 19 USPQ2d 1111]

[Applicants’ application S.N. filed 07/096,097 filed 9/11/1987 has been designated a “CIP” by applicants. The question arises as to whether or not this application constitutes a “true” CIP/continuation:

- 1) Are the claims of the instant application reciting subject matter that is described in the CIP specification, which described/claimed subject matter was previously described in the original 1981 parent specification too (e.g. that which was contained in S.N. 06/317,510); or, alternatively,
- 2) Are the claims reciting described 1987 CIP subject matter so changed by the “new matter” introduced via the filing of the 1987 CIP that the “substance” of the subject matter being claimed, e.g. the invention, has been changed.

¹ NOTE: this case was appealed [Tronzo v. Biomet (CA FC) 47 USPQ2d 1829]

These are not easy questions to answer given the way in which the applicants elected to draft and file said CIP application S.N. 07/096,096 of 9/11/1987. That is:

1) The 557 pages of new text that comprises applicants' instant 1987 CIP specification fail to incorporate the 44 pages of old text that comprised applicants' 1981 parent specification either:

a) "By reference"; or

b) "Specifically"/physically in any immediately discernible fashion.

Therefor, it is not readily apparent from the instant 1987 CIP specification as to how much, if any, of the subject matter from the 1981 specification has been carried forward into the instant 1987 CIP specification;

2) Even when one assumes that at least some teachings from the 1981 parent specification have been carried forward into the 1987 CIP specification, it is clear that these 1981 teachings have, beyond question, been extensively modified with new 1987 subject matter. Applicants themselves use terms such as "expanded", "enhanced", and "improved" to characterize such "modifications." To the extent that these modifications, i.e. the added new 1987 subject matter, has changed in the substance of the inventions described and claimed with respect to the 1987 specification, priority to 1981 effective filing date under section 120 has been lost.

Therefor, given the present state of affairs, one must not only determine exactly what it is that is now being described and claimed with respect to the 557 pages of the instant 1987 CIP specification but, to determine whether this recited subject matter is entitled to the 1981 effective filing date, one must then determined whether that which is now described and claimed was previously described, in accordance with all the same requirements of section 112, in the 1981 parent specification too (are the respective 1987 and 1981 descriptions "legal equivalents" with respect to that which is claimed). That is, one is now forced to judge whether the modified descriptions of the 1987 CIP specification alter the substance of that which is now claimed, with respect to that which was originally described in the 1981 specification, to a point where priority to the 1981 effective filing date is not permitted under section 120. That is, for each claim for which the 1981 effective filing date is sought, one is forced to consider whether it is subject matter from the 44 parent specification, carried forward into the 557 pages of the instant 1987 CIP specification, that is "*solely*" claimed (i.e. whether the claim is in fact reciting "common subject matter" described in both specifications).

For if applicant's CIP application is not a "true" CIP application then the claims thereof are, at best, only entitled to the 9/11/1987 original filing date of the 557 page CIP specification]

A-2) Applicants' chain of pendency:

a) On 11/03/1981, applicants filed US Patent application S.N. 06/317,510 that eventually matured into US Patent #4,694,490. The 1981 specification of this originally filed parent application contained a written description that comprised 44 pages of text and related figures. On 2/14/1986, first continuation application S.N. 06/829,531 was filed which comprised the same 1981 parent specification.

b) On 9/11/1987, applicants filed CIP application S.N. 07/096,096 that eventually matured into US patent #4,965,825. The specification of this 1987 CIP application contained a written description that comprised 557 pages of text and related figures. A chain of four continuation applications (i.e. 07/588,126, 07/849,226, 08/056,501, and 08/113,329) was then filed from this 1987 CIP application all of which comprised the same 1987 CIP specification.

c) The instant application, and the 327 related bulk filed applications, were all filed as continuations of S.N. 08/113,329 and comprises the same 557 page 1987 CIP specification. For some of these applications (i.e. all claims contained therein) applicants' have alleged the 1987 effective filing date of the 557 page CIP application, whereas for the remaining ones of these applications (i.e. all claims contained therein) applicants' have alleged the 1981 effective filing date of the original 44 page parent application.

A-3) The Earlier Effective Filing Dates that are Alleged Under Section 120:

1) The 1987 effective filing date:

As is evident from the chain of pendency cited above, the 557 page specification of the instant application is the same as the 557 page specification of the 1987 CIP application. Being such, to obtain the 1987 effective filing date, applicant needs only show that the claims of the instant application are supported under section 112 by the 557 pages of this instant 1987 CIP specification.

2) The 1981 effective filing date:

If applicants had incorporated the 44 page 1981 parent specification into the 557 pages of the instant 1987 CIP specification either via an "incorporation by reference" or "specifically"/physically in some immediately discernible fashion, then the process of obtaining the 1981 effective filing date for that which is now claimed would have been simple indeed. Applicants would only have had to draft the instant claims solely to the subject matter of the 1981 parent specification.

Applicants, however, elected not to incorporate the 1981 specification into the instant 1987 specification either "by reference" or "specifically"/physically thereby, as discussed above, making the process of obtaining the 1981 effective filing date significantly more arduous.

To obtain the 1981 effective filing date for that which is now claimed, given the current fact pattern, applicant must be able to reach back to the 1981 parent specification (and subject matter) by way of the instant 1987 CIP specification. That is, applicant must be able to show that the claim construction that results when a given claim is construed under section 112 by the descriptions of the instant 1987 CIP specification, is the same/equivalent claim construction that would have resulted had the same claim been construed under section 112 by the descriptions of the discarded 1981 parent specification; i.e. that the respective 1987 and 1981 descriptions of the claimed subject matter are legal equivalents. Stated another way, applicants' must be able to show that the claims of the instant CIP specification are directed **solely** to "common subject matter" found in both specifications; i.e. that the "claimed subject matter" that is described by the 557 pages of the instant 1987 CIP application in accordance with all of the requirements of section 112 was previously described by the 44 pages of the discarded 1981 parent specification. Stated a third way, applicants must be able to show that the instant application and claims effectively constitutes a "true" CIP application with respect to the 1981 parent application.

"[The] bottom line is that, no matter what term is used to describe a continuing application, that application is entitled to the benefit of the filing date of an earlier application only as to common subject matter"

[Transco Products Inc. v. Performance Contracting Inc. (CA FC) 32 USPQ2d 1077)].

“A continuation-in-part application is not entitled to the benefit of the earlier filing date of its parent application where the changes included within subsequent applications are ‘new matter’ which either alters the substance of the invention or makes the composition an invention for the first time”

[Indiana General Corp. v. Krystinel Corp., 161 USPQ 82, 94-95]

“The question in cases in which the parent application does *not* contain language contained in the claims of the later application is whether the language which *is* contained in the parent application is the legal equivalent of the claim language, in the sense that the ‘*necessary and only reasonable* construction to be given the disclosure [in the parent application] by one skilled in the art’ is the same as the construction which such person would give language in claims of the later application.”

[WAGONER AND PROTZMAN v. BARGER AND HAGGERTY, 175 USPQ 85, 86 (CCPA 1972)].

A-4) Applicant's position concerning the "Dual" section 112 support:

Presently, the examiner and applicants are in agreement that, in order for a given claim to be entitled to the 1981 effective filing date, applicants must be able to show that *some kind* of "dual" 1987 and 1981 section 112 support exists in the respective 1987 and 1981 disclosures for the given claim. The examiner and applicants, however, continue to disagree as to what this "dual" section 112 support must comprise. Specifically:

1) Applicants continue to take the position that the respective 1981 and 1987 disclosures may indeed describe proverbial "apples and oranges", respectively, yet the claims of the CIP application may still be entitled to section 120 priority provided that a broad "quasi-generic" claim can be drafted which independently reads on (i.e. is independently "anticipated" by) the proverbial "apples" and the "oranges" of the respective applications. That is, applicants allege that:

"[Section] 120 does not require an applicant to demonstrate that the disclosures relied upon under 120 have anything in common besides their ability to separately comply with 112-1 with respect to the claims for which priority is sought. Accordingly, the Examiner's focus on comparing the support from the two applications for similarity or common subject matter is improper and irrelevant because all applicants are required to do is satisfy 120 is show that each disclosure meets the requirements of 112-1 for a given claim." (emphasis added)
[Page 141 of applicants' response filed on 1/28/2002 in application S.N. 08/470,571]

"Accordingly, the law requires a two part test in which the applicant separately demonstrates 112 support for each application. In the FOA, the examiner distorts this straightforward test by imposing a third element of the test whereby the 112 support from each application consists of 'common subject matter.'"
[See the last 10 lines on page 137 of the response filed on 1/28/2002 in SN 08/470,571].

2) In contrast, the examiner maintains that section 112 support must come from "common subject matter" (i.e. the "same invention") described in both specifications such that the respective claim constructions that result when a given claim is construed in light of the respective disclosures is the same/equivalent; i.e.

"However, as mentioned earlier, a continuing application is entitled to rely on the earlier filing date of an earlier application only with respect to subject matter common to both applications" (emphasis added)
[In *Transco Products, Inc., v. Performance Contracting, Inc.*, 32 USPQ2d 1077 [*18]]

"The inquiry required by section 120 demands a comparison of 1) the claims of the parent and CIP applications and 2) any other disclosures made in the applications such as specification and drawing. *Acme Highway*, supra, at 1079, 167,USPQ at 132-33."
[*Stern v. Superior Distributing Company et al.*, (CA 6), 215 USPQ 1089 at 1094]

Clearly, applicants' position that the respective parent and CIP disclosures, "need not have anything in common besides their ability to separately comply with 112-

1 with respect to the claims for which priority is sought," permits and invites multiple claim constructions to exist for each claim in question; i.e.

- a) A first construction that results when the claim is construed under section 112 in light of first subject matter that is described in the child/CIP specification; and
- b) A second different construction that exists when the same claim is "separately" construed under section 112 in light of different subject matter that was previously described in the parent specification.

The examiner maintains that it is improper for multiple claim constructions to exist for a given claim within a patent application. Hence, the examiner maintains that applicants' belief that "common subject matter" is irrelevant to the section 120 priority issue seems both erroneous and flawed. Some hypothetical examples will be discussed in the following section of this Office action for the purpose demonstrating this point.

A-5) Can an applicant use a broad “quasi-generic” claim within an alleged CIP application as a license for effecting wholesale changes to the written description (and the subject matter described therein) while maintaining priority to an earlier filing date under Section 120?

Applicants’ positions concerning the use of “dual” section 112 support under section 120 seem to say: “YES”.

The following hypothetical fact patterns are presented to illustrate why the examiner believes the answer to be: “NO.”

A) Hypothetical situation #1:

- a) An applicant files a first application that **ONLY** discloses a bicycle. In this first application, the applicant presents a first claim for a “multi-wheeled cycle”.
- b) Three years into the prosecution of the first application, this applicant becomes aware of someone who invented the tricycle.
- c) At this point, the applicant files a second application that **ONLY** discloses the tricycle (it does not disclose the bicycle of the first application). Applicant alleges that this second application is “CIP” of the first application. Applicant then transfers the “multi-wheeled cycle” claim from the first application into this second application and claims priority for the transferred claim, under section 120, back to the first application. Applicant then abandons the first application.

Is the transferred claim of the second application entitled to the earlier filing date of the first application under section 120?

1) Clearly, the answer would have been “yes” had the disclosure of “the bicycle” from the first application actually been carried forward into the disclosure of the second application being that the claim could have been legitimately supported by “common subject matter” from both applications (i.e. specifically, by the disclosed bicycle of both applications).

2) However, under the circumstances cited above, i.e. wherein the disclosure of the first application was *discarded* and not carried forward into the second application, the case for priority under section 120 seems less than clear. Namely:

- a) When the “multi-wheeled cycle” claim was first presented in the first application it was supported under section 112 only by the disclosure of

the bicycle found in the first application. **The section 112 support for "multi-wheeled cycle" was "bicycle".**² Most likely (but not necessarily), a fair reading of the "multi-wheeled cycle" claim would have included tricycles too.

b) However, when said "multi-wheeled cycle" claim was transferred into the second application, it was now supported under section 112 only by the disclosure of the tricycle found in the second application - i.e. being that the bicycle disclosure of the first application was not carried forward into the second application. **The section 112 support for "multi-wheeled cycle" was now "tricycle".**³ Thus, a fair reading of this same claim now necessarily (not just "most likely") includes the tricycle.

Thus, if priority under section 120 is accepted, then via the filing of the alleged CIP, it appears that applicant has effectively put everyone on notice (via the new disclosure of the CIP) that he invented the tricycle at the time he actually invented the bicycle.⁴ Can this be right/proper?

B) Hypothetical situation #2:

- a) An applicant files a first application that **ONLY** discloses a bicycle. In this first application, the applicant presents a first claim for a "multi-wheeled vehicle".
- b) Three years into the prosecution of the first application, this applicant becomes aware of someone who invented the tricycle.

² The "multi-wheeled cycle" limitation broadly recites the "bicycle" being that the instant written description must describe the invention that is claimed.

³ Now, the new "multi-wheeled vehicle" limitation now broadly recites the "tricycle" being that the instant written description must describe the invention that is claimed.

⁴ In *Vas-Cath Inc. v. Mahurkar* (CA FC) 19 USPQ2d 1111, 1114, it was noted that one might be inclined to question the purpose of a separate written description requirement of section 112 in view that "the invention" is in fact the subject matter that is defined by the claims being considered:

"One may wonder what purpose a separate 'written description' requirement serves, when the second paragraph of 112 expressly requires that the applicant conclude his specification 'with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.'"

Reasons for having the separate descriptive requirement, as noted in *In Vas-Cath Inc. v. Mahurkar* (CA FC) 19 USPQ2d 1111, 1115, included the following:

- 1) An adequate written description of the invention provides a "warning an innocent purchaser, or other person using a machine, of his infringement of the patent; and at the same time taking from the inventor the means of practicing upon the credulity or fears of other persons, by pretending that his invention is more than what it really is, or different from its ostensible objects, that the patentee is required to distinguish his invention in his specification"; and
- 2) An adequate written description of the invention "guards against the inventor's overreaching by insisting that he recount his invention in such detail that his future claims can be determined to be encompassed within his original creation."

[*Vas-Cath Inc. V. Mahurkar* (CA FC) 19 USPQ2d 1115]

c) At this point, applicant files a second application that **ONLY** discloses the tricycle (it does not disclose the bicycle of the first application). Applicant alleges that this second application is "CIP" of the first application. Applicant then transfers the "multi-wheeled vehicle" claim from the first application into this second application and claims priority for the transferred claim, under section 120, back to the first application. Applicant then abandons the first application.

d) Two years into the prosecution of the CIP application, applicant becomes aware of someone who invented the automobile.

e) At this point, applicant files a third application that **ONLY** discloses the automobile (it does not disclose the bicycle of the first application or the tricycle from the second application). Applicant alleges that this third application is "CIP" of the second application that is a CIP of the first. Applicant then transfers the "multi-wheeled vehicle" claim from the second application into the third application. Applicant then abandons the second application.

Is the claim in this third application entitled to the earlier filing date of the first application under section 120?

a) When the "multi-wheeled vehicle" claim was first presented in the first application it was supported under section 112 only by the disclosure of the bicycle found in the first application. **The section 112 support for "multi-wheeled vehicle" was "bicycle".**⁵

b) When the "multi-wheeled vehicle" claim was transferred to the second application it was then supported under section 112 only by the disclosure of the tricycle found in the second application. **The section 112 support for "multi-wheeled vehicle" was then "tricycle".**⁶

C) Now that the "multi-wheeled vehicle" claim has been transferred to the third application it is now supported under section 112 only by the disclosure of the automobile found in the second application. **The section 112 support for "multi-wheeled vehicle" is now "automobile".**⁷

*Thus, if priority under section 120 is accepted back to the first application, then via the filing of two alleged CIP applications, applicant has effectively put everyone on notice (via the disclosure of the second CIP) that he invented the automobile at the time he actually invented the bicycle.*⁸ **Can this be right/proper?**

⁵ The "multi-wheeled vehicle" limitation broadly recites the "bicycle" being that the instant written description must describe the invention that is claimed.

⁶ The "multi-wheeled vehicle" limitation broadly recites the "tricycle" being that the instant written description must describe the invention that is claimed.

⁷ The "multi-wheeled vehicle" limitation broadly recites the "automobile" being that the instant written description must describe the invention that is claimed.

⁸ In Vas-Cath Inc. v. Mahurkar (CA FC) 19 USPQ2d 1111, 1114, it was noted that one might be inclined to question the purpose of a separate written description

1) Clearly, the answer might have been “yes” had the disclosure of “the bicycle” from the first application actually been carried forward into the disclosures of the second and third applications being that the claim could have been legitimately supported by “common subject matter” found in all three applications of the chain (i.e. said disclosed bicycle).

2) The answer is also “yes” when one adopts applicants’ position that, to obtain section 120 priority, one needs only shown that each application provides some kind of section 112 support for the claim ***regardless of whether the section 112 support provided by each application is similarities or not.*** However, applicants’ position seems flawed because it appears to confuse the section 112 requirements of section 120 with the “anticipation” standard section 102. That is, while the “multi-wheeled vehicle” claim is arguably “anticipated” in accordance with section 102 by the “bicycle” of the first application, by the “tricycle” of the second application, and by the “automobile” of the third application, the claim construction for the “multi-wheeled vehicle” limitation (i.e. the section 112 support for the claim) has clearly morphed during its travel from the first application through the second CIP application and to the third CIP application:

a) The claim construction (i.e. the section 112 support) was “bicycle” when the claim was originally presented in the first application;

b) The claim construction (i.e. the section 112 support) was morphed to “tricycle” when the claim was transferred to the second application; and

c) The claim construction (i.e. the section 112 support) was morphed to “automobile” when the claim finally landed in the third application.

That is, the claim construction (i.e. section 112 support) for the “multi-wheeled vehicle” claim in the third application is “automobile”. Being that this claim construction (i.e. section 112 support) was not provided by either of the first and second applications it is the examiner’s understanding that this claim (i.e. its construction) is not entitled to section 120 priority back to either the first or

requirement of section 112 in view that “the invention” is in fact the subject matter that is defined by the *claims* being considered:

“One may wonder what purpose a separate ‘written description’ requirement serves, when the second paragraph of 112 expressly requires that the applicant conclude his specification ‘with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.’”

Reasons for having the separate descriptive requirement, as noted in *In Vas-Cath Inc. v. Mahurkar* (CA FC) 19 USPQ2d 1111, 1115, included the following:

- 1) An adequate written description of the invention provides a “warning an innocent purchaser, or other person using a machine, of his infringement of the patent; and at the same time taking from the inventor the means of practicing upon the credulity or fears of other persons, by pretending that his invention is more than what it really is, or different from its ostensible objects, that the patentee is required to distinguish his invention in his specification”; and
- 2) An adequate written description of the invention “guards against the inventor’s overreaching by insisting that he recount his invention in such detail that his future claims can be determined to be encompassed within his original creation.”

[*Vas-Cath Inc. V. Mahurkar* (CA FC) 19 USPQ2d 1115]

second application; i.e. despite applicants' position to the contrary. That is, while both descriptions provide respective 112-1 support for the claims, the respective descriptions/constructions do not appear to be legal equivalents.

To accept such an allegation of section 120 priority seems to confuse the issue of "anticipation" under section 102 with the requirements of Section 112 that have been literally incorporated into Section 120. That is, to be entitled to section 120 priority, the Section 112 support that is provided by the respective specifications of the continuing applications must be for the "same invention" (regardless of wording); i.e. the respective descriptions must be legal equivalents with respect to that which is claimed.⁹

⁹ It is ridiculous for applicants to suggest that the section 120 issue being raised by the examiner is the result of mere differences in "wording" between the 1981 descriptions of the discarded 1981 parent specification and the 1987 descriptions of the instant 1987 CIP specification - as applicants would like to have one believe [SEE: lines 4-9 on page 41 of the response filed 1/9/2003 in 08/470,571]. Evidence of this is found in the fact that applicants have been unable to cite respective 1981 and 1987 descriptions in support of the claims that are the same/equivalent except for their wording. To the contrary, in all cases presented thus far, applicants have ultimately been forced to argue that the cited 1981 and 1987 descriptions are "equivalent" when one overlooks and ignores the improved/enhanced/expanded 1987 SPAM subject matter that comprises the described "present invention" of the instant 1987 CIP specification.

However, what is applicants' basis and justification for ignoring and discarding the new 1987 CIP descriptions when constructing the instant claims? Can applicants properly use the discarded 1981 specification to squeeze discarded 1981 subject matter from the new 1987 CIP SPAM subject matter that is actually described in the instant 1987 CIP specification? Can applicants properly use broadly drafted "quasi-generic" claims as the tool to allege that only discarded 1981 subject matter from the discarded 1981 specification is being claimed when, in fact, the section 112 support for the claims necessarily comes from the new 1987 CIP SPAM subject matter that is (by definition) the "present invention" of the instant 1987 CIP specification?

A-6) While different, the fact pattern of the instant application has some significant similarities to the hypothetical examples discussed above:

A) First, like the hypothetical examples cited above, current applicants literally *discarded* the specification of their 1981 parent application at the time they drafted and filed the instant 1987 CIP disclosure. That is, the written description of the 1981 parent specification was replaced by the new 1987 written description of the instant 1987 CIP specification; i.e. being that applicants elected not to carry forward (i.e. formally incorporate) 1981 specification therein. More to the point, like the hypothetical examples cited above, via the filing of an alleged CIP application, the current applicants have effectively replaced the description of 1981 apparatus, 1981 methods, and 1981 signaling of the 1981 parent specification with "expanded"/"enhanced"/"improved" descriptions of the 1987 "SPAM" apparatus, 1987 "SPAM" methods, and 1981 "SPAM" signaling that comprise the "present invention" of the instant 1987 CIP specification.

Note:

1) Applicants have acknowledged that the description of inventions that is provided by the 557 pages of their instant 1987 CIP specification is different than the description of inventions that was provided by the 44 pages of their original 1981 parent specification. This acknowledged difference comes as no surprise being that:

- a) The 1987 written description of the instant 1987 CIP specification is more than 510 pages longer than, and more than 12 times the length of, the 44 page written description of the 1981 parent. Clearly, at best, a substantial amount of new 1987 subject matter has unquestionably been added via the filing of the instant 1987 CIP; and
- b) The 1987 description of the instant 1987 CIP is entirely "new" in the sense that the written description of the 1981 parent specification was neither incorporated into the 1987 CIP specification "by reference" nor was it incorporated into the 1987 CIP specification in any immediately discernible fashion. This makes it extremely difficult to determine exactly how much of the 1981 subject matter, if any, was carried forward into the specification of the 1987 CIP in a way that does not constitute "New Matter".

In fact, applicants themselves have used terms such as "expanded", "enhanced", and "improved" to characterize the content of the "new" 1987 descriptions of the 1987 CIP when compared to the content of the past 1981 descriptions of the discarded¹⁰ 1981 parent specification.

¹⁰ The term "discarded" accurately describes the present situation because of applicants choice not to, or failure to, incorporate the past 1981 specification into the instant 1987 CIP specification "by reference", or in any unmodified, unenhanced, unexpanded, and unimproved way whatsoever. That is, the 1981 parent specification is not part of the "instant 1987 CIP specification" due to the lack of formal/proper incorporation therein; i.e. the past 1981 parent specification itself having therefor been "discarded" in favor of the new 1987 CIP specification. The result being that the new 1987 CIP specification stands alone as the "instant specification" upon which any and all section 112 issues must be judged.

2) The 1987 "SPAM" acronym was specifically coined by, and used throughout, the instant 1987 CIP specification to refer to the:

"Signal Processing Apparatus and Methods of the present invention" (emphasis added) [e.g. note page 40 of the instant 1987 CIP specification]

This "SPAM" acronym provides clear evidence that the "present invention" described in the instant 1987 CIP specification was, by definition, the expanded/enhanced/improved 1987 SPAM signal processing apparatus and methods described therein.

Moreover, within the instant 1987 CIP specification, the auxiliary signaling that was conveyed by the 1987 "SPAM" apparatus and methods was explicitly identified as being "SPAM" signaling; i.e. the described "signals" of the "Signal Processing Apparatus and Methods of the present invention" of the 1987 CIP. These "SPAM signals" were described by the 1987 CIP as having comprised the sophisticated signal packet structure that is shown in figures 2E-2K of the instant 1987 CIP specification. No such sophisticated packet structure was ever shown or described with respect to the auxiliary signaling found in the discarded 1981 parent specification. Being such, the 1987 SPAM signaling represents a significant difference between the instant and discarded specifications in that it was the introduction of this sophisticated 1987 SPAM signal packet structure into the 1987 CIP which provided a transport mechanism by which the expanded/enhanced/improved 1987 SPAM apparatus and methods of the 1987 CIP specification were enabled to carry complex control and instruction information including, most significantly, "computer software". That is, it was the sophisticated packet structure of the 1987 SPAM signaling which provided the mechanism by which large sequences computer software code could be downloaded from an upstream transmitter location to a plurality of receiver locations; i.e. a feature that was not described nor provided for within the 1981 systems and methods of the discarded 1981 parent specification - despite applicants' allegation to the contrary [SEE: Appendix IV attached hereto].

Also Note: Appendix III and Appendix V attached hereto.

B) Thus, as with the hypothetical examples cited above, via the filing of the instant 1987 CIP application and a claim for section 120 priority back to a discarded 1981 parent specification, it seems that applicants are effectively putting everyone on notice (via the expanded/enhanced/improved disclosure of the instant 1987 CIP) that they invented the 1987 SPAM apparatus/methods/signaling of the instant 1987 CIP specification at the time they actually invented lesser 1981 methods/apparatus/signaling of the discarded 1981 parent specification. That is:

1) By *discarding* the 1981 parent specification via the filing of the 1987 CIP specification, applicants literally force the instant claims to be "constructed"/construed in the context of the new expanded/enhanced/improved 1987 SPAM apparatus/methods/signaling that comprise the "present invention" of the instant 1987 CIP specification ¹¹; while

2) By claiming section 120 priority for these required 1987 claim "constructions", applicants effectively obtain an earlier 1981 filing date for these 1987 claim "constructions". ¹²

¹¹ Being that the instant specification from which all section 112 support must be derived is the instant 1987 CIP specification alone.

¹² Being that the discarded 1981 parent specification did not disclose the 1987 SPAM apparatus/methods/signaling and therefor does not provide section 112 support for the same 1987 CIP claim constructions.

If permitted, such a process can improperly bestow real and significant advantages on applicants who file CIP applications in this fashion.¹³ Something is amiss. Clearly, priority under section 120 was provided as a way for preserving property rights and not as a way for going back retroactively and “expanding”, “enhancing”, and “improving” upon existing rights via one or more subsequently filed enhanced/improved/expanded CIP disclosures.

C) On pages 47 and 48 of the response filed 1/29/2003 in 08/487,526 applicant states the following:

“Applicants acknowledge that the 1987 disclosure contains numerous improvements and enhancements of the 1981 disclosure. Notwithstanding this fact, as long as each of applicant’s inventions claimed in the instant application is described adequately in both specifications, the test under [section] 120 is met”

<The examiner agrees in part. The examiner notes, however, that the respective section 112 support for that which is claimed (the description requirement, the enablement requirement, and the best mode requirement) must be to the “same invention”; the requirements of section 112-1 of section 120 must not be confused with “anticipation” under section 102>

“If applicants attempt to include limitations of the improvement and enhancements from the 1987 specification in a given claim, that claim **could not** receive priority under [section] 120 because the claim could not be supported under [section] 112 by the subject matter disclosed in the 1981 specification.” [emphasis added]

<The examiner agrees with this statement noting that “could not” actually means:
-- should not --; or -- could not legally -->

“This does not mean, however, that applicant cannot rely on passages from the 1987 specification that include those improvements and enhancements to support a claim that does not include those improvements and enhancements. **The question is whether or not the provided 1987 support describes the more basic inventions being claimed, regardless of whatever else those passages may also describe**” (emphasis added)

<Clearly, under section 112, the instant 1987 CIP specification must describe “the inventions” being claimed. If there are passages (or portions thereof) within the instant 1987 CIP specification that actually describe applicants’ alleged “more basic inventions”, as is clearly implied by applicants’ argument, then why do applicants not specifically cite these teaching of “the more basic inventions” as being the required section 112 support for that which is claimed. How can applicants cite passages that describe enhanced/improved/expanded 1987 subject matter **to support the claims’ limitations under section 112**, and then turn around and argue that the claims are really directed to a “more basic” invention that is, allegedly, embedded somewhere within the cited

¹³ It would enable an applicant to use CIP practice to enhance/improve/expand the way in which a given “quasi-generic” claim must be construed without loss of filing date.

passages to obtain an earlier effective filing date for that which is claimed. How does applicant propose one (e.g. a member of the public or an examiner) discern the "more basic inventions" that are allegedly being claimed from the expanded/enhanced/improved inventions that are actually described in the instant 1987 CIP specification when, during the course of prosecution, applicants themselves have explicitly cited this enhanced/improved/expanded 1987 subject matter as being the section 112 support for that which is claimed. In reality, is it not the expanded/enhanced/improved 1987 subject matter that is really being claimed, albeit broadly, as opposed to the 1981 inventions which were discarded along with the 1981 specification?

Again, do applicants' believe that multiple claim constructions can properly exist for each of the claims in question?

a) That there can be a first 1987 claim construction that results when a claim's limitations are **fully** construed in light of the enhanced/improved/expanded 1987 SPAM subject matter of "present invention" that is actually described by the instant 1987 CIP specification; and, at the same time,

b) A second "more basic" claim construction that results when the claim's limitations are **less than fully** construed in light of alleged "more basic" teachings which applicant attempts to selectively carve/infer from the cited enhanced/improved/expanded 1987 CIP teachings by suggesting that the enhancements/improvements/expansions that comprise the descriptions of the instant 1987 specification simply be discounted and ignored, even though it is this un-carved enhanced/improved/expanded 1987 CIP subject matter that applicant explicitly cites as being the section 112 support for that which is claimed.¹⁴

To the contrary, the examiner maintains that only one claim construction can properly exist for each claim in question, and that is the one that results when the claim is **fully** construed in light of the entire enhanced/improved/expanded written descriptions that comprise the instant 1987 CIP specification from which the instant claims necessarily derive their required section 112 support. If and only if, for each claim in question, its one proper claim construction finds "equivalent" section 112 support in the discarded 1981 parent specification too, e.g. if it in fact the claim recites "common subject matter", is the claim entitled to the earlier 1981 filing date of the discarded 1981 parent specification under section 120. The respective description must be legal equivalents and must describe the same invention>.

¹⁴ That is, under section 112 applicants seem to indicate that they are in fact claiming the enhanced/improved/expanded 1987 subject matter, being that it is enhanced/improved/expanded 1987 subject matter that is explicitly cited by applicant as being the required section 112 support for that which is claimed. In contrast, under section 120 applicants seem to argue/"pledge" that the claims are only directed to that portion of this cited enhanced/improved/expanded 1987 subject matter that allegedly corresponds to lesser 1981 apparatus/methods/signaling that were described in the discarded 1981 parent specification. The problem is, however, that the instant 1987 CIP specification does not support applicants' argument/"pledge" made under section 120 that the claims should be constructed/construed as being directed to the lesser 1981 subject matter of the discarded 1981 specification being that this lesser 1981 subject matter was not carried forward into the instant 1987 CIP specification in any immediately discernible fashion (nor in a way that does not incorporate prohibited "new matter").

A-7) “Pledge Theory”:

A) Applicants’ allegation, under section 120, that certain ones of the 328 bulk filed applications (i.e. the claims contained therein) are entitled to the 1981 effective filing date could be proven, where/when necessary, if applicants were to:

- 1) Specifically identify the “common subject matter” that allegedly exists within both the instant 1987 CIP specification and the *discarded* 1981 parent specification;
- 2) Draft the claims to be specifically directed to this identified “common subject matter”; and
- 3) Submit arguments indicating that the drafted claims are to be constructed and construed based on so identified “common subject matter”.

B) However, in contrast to this approach, applicants seem to submit conflicting arguments. Namely, applicants have and continue to:

- 1) Submit arguments, when dealing with section 112 issues, taking the position that the claims must be constructed/construed in light of all the 1987 subject matter that is contained throughout the 557 pages of the instant 1987 CIP disclosure and, therefor, should not be constructed/construed as being directed to the specific passages of the 1987 CIP specification that have been cited by applicants in support of the claims for, according to applicants’ arguments, these passages have only been cited as “exemplifying” one of the many ways in which the claims allegedly find section 112 support by descriptions found throughout the 557 pages of the instant 1987 CIP disclosure; and, in contrast,
- 2) Submit arguments, when dealing with the 1981 section 120 priority issue, taking the position that the claims should not be construed/constructed in light of all the subject matter that is described in the 557 page instant 1987 CIP disclosure, but rather that the claims should be construed/constructed in light of alleged “more basic inventions” that supposedly exist buried somewhere within the enhanced/expanded/improved subject matter that is described by the specific passages of the 1987 CIP disclosure cited by applicants.

“Applicants acknowledge that the 1987 disclosure contains numerous improvements and enhancements of the 1981 disclosure. Notwithstanding this fact, as long as each of applicant’s inventions claimed in the instant application is described adequately in both specifications, the test under [section] 120 is met.....If applicants attempt to include limitations of the improvement and enhancements from the 1987

specification in a given claim, that claim could not receive priority under [section] 120 because the claim could not be supported under [section]

112 by the subject matter disclosed in the 1981 specification.....This does not mean, however, that applicant cannot rely on passages from the 1987 specification that include those improvements and enhancements to support a claim that does not include those improvements and enhancements.....
The question is whether or not the provided 1987 support describes the more basic inventions being claimed, regardless of whatever else those passages may also describe" (emphasis added)
[pages 47 and 48 of the response filed 1/29/2003 in S.N. 08/487,526]

C) Applicants' contrasting arguments seems to indicate that applicants believe it proper for a given claim of a patent application to have multiple "constructions"; i.e. a first "all encompassing" construction that occurs when the claim is construed in light of the entire 1987 CIP specification (i.e. the "standard" argued by applicants when addressing section 112 support issues); and a second "more basic" construction that is limited to "more basic inventions" (i.e. the "standard" argued by applicants when addressing 1981 section 120 priority issues). Accepting this multiple claim construction argument seems to permit a process in which an applicant can draft claims which must necessarily be constructed/construed in light of "new subject matter" of a CIP application and yet, at the same time, permitting the so construed/construed claims to capture the earlier effective filing date of a parent application which did not include the same or equivalent descriptions of this new CIP subject matter.

The examiner does not believe that such a process is permitted under Section 112-1 as incorporated into Section 120. As understood by the examiner, applicants' instant claims must be given the "all encompassing" 1987 construction as provided by the entire instant 1987 CIP specification [unless, perhaps, applicants were to submit arguments indicating otherwise (i.e. arguments which limit the way in which the claim are constructed/construed to specifically identified "common subject matter")]. The examiner maintains that the instant claims are entitled to the 1981 filing date only if/when applicant can show that this all encompassing 1987 construction finds the same/equivalent all encompassing construction in the 1981 parent specification too.

A-7) “Smudge Theory”:

During the present prosecution, the examiner noted that any claim which recites even the smallest amount of “new matter” from the instant 1987 CIP specification is, at best, only entitled to the 1987 effective filing date of the CIP application which first introduced this “new matter”; e.g.

“Why should a pending claim having limitations that are directed to even a smudge of new 1987 subject matter be entitled to the earlier 1981 filing date of the Parent specification which did not disclose that smudge of new subject matter?”

The examiner finds nothing controversial in this stated position. Yet, on pages 29 and 30 of the response filed 1/9/2003 in 08/470,571, applicants feel the need to refute the examiner’s position (as stated). However, elsewhere within the same response, e.g. the sentence that begins in the last two lines on page 42, applicants’ affirm the examiner’s position in their own words.

“If applicants attempt to include limitations of the improvement and enhancements from the 1987 specification in a given claim, that claim could not receive priority under [section] 120 because the claim could not be supported under [section] 112 by the subject matter disclosed in the 1981 specification.” (emphasis added)

For the sake of argument, the examiner accepts and hereby adopts applicants’ wording of this issue. ¹⁵

¹⁵ It is noted, however, that there is no way for the examiner to formally reject a claim under section 112-1 based on the 1981 disclosure being that the instant disclosure is the instant 1987 CIP specification, and not the discarded 1981 specification. Thus, within applicants’ cited statement, it seems more accurate if the phrase “that claim **could** not receive” were changed to read --that claim **should** not receive” [i.e. if applicants’ claim to the 1981 effective filing date was accepted, and if applicants claim to the 1981 date was erroneous/flawed, then the claim “would” receive priority under section 120 during prosecution when, in reality, said claim “should” not have received priority].

B

X

**B. REAL CHANGES IN THE SUBSTANCE
OF THE WRITTEN DESCRIPTION:**

B-1) As noted above all CIP applications are not “true” CIP applications. That is, if the CIP application introduces “NEW MATTER” which alters the substance of the invention being claimed, then the CIP is not a true continuation and claims which recite such altered subject matter are not entitled to the effective filing date of the parent under section 120.

“A continuation-in-part application is not entitled to the benefit of the earlier filing date of its parent application where the changes included within subsequent applications are ‘new matter’ which either alters the substance of the invention or makes the composition an invention for the first time”

[Indiana General Corp. v. Krystinel Corp., 161 USPQ 82, 94-95]

After all, one is not allowed to use CIP practice as a vehicle to expand the substance of the invention without the loss of effective filing date.

“Unlike the enablement provision of section 112, where the disclosure of a single species might be sufficient to enable a practitioner skilled in the art to make and use any member of the genus,....., the written description requirement of section 112 requires more. See *Vas - Cath, supra*. This strict reading of the written description requirement prevents an inventor from surreptitiously expanding a patent through successive continuation-in-parts.

See *id.* At 1562. Essentially, it limits the claims of an applicant to those inventions he clearly discloses, either expressly or inherently” (emphasis added)
[Tronzo v. Biomet Inc. (DC SFla) 41 USPQ2d 1403 ¹⁶ citing *Vas-Cath Inc. v. Mahurkar* (CA FC) 19 USPQ2d 1111]

QUESTION: Has the “NEW MATTER” that has been introduced by the “expanded”, “enhanced” and “improved” descriptions of applicants’ 557 page 1987 CIP disclosure changed the “substance” of the claimed invention?

B-2) Obviously, the answer to this question:

a) Can only be answered, specifically, on a claim by claim being that section 120 priority pertains to the claimed invention; and

b) Needs only be addressed/considered when priority to the earlier filing date is actually needed to overcome applied intervening prior art; i.e. the issue is moot when valid intervening prior art has not been applied against the claim.

¹⁶ NOTE: this case was appealed [Tronzo v. Biomet (CA FC) 47 USPQ2d 1829]

B-3) Certainly, however, changes to the “substance” of that which is described by written description have been effected at all levels of the disclosure via the “new matter” that has been introduced by the drafting and filing of the instant 1987 CIP application: e.g.,

1) To describe the 1981 systems and methods, applicants utilized their right to be their own lexicographer and, within the 1981 parent specification, explicitly coined and defined various terms to have specific 1981 meanings. Much of the same terms/terminology has been carried forward into the description of the 1987 CIP. However, the presence of the common terminology gives a false sense of commonality between the 1981 and 1987 CIP specifications because in drafting the 1987 CIP disclosure, applicants again utilized their right to be their own lexicographer and explicitly re-coined and re-defined much of the same terminology to have different broadened/expanded 1987 CIP meanings. To the extent that these broadened/expanded 1987 definitions impart new broadened/expanded changes to the substance of the inventions that are now claimed, priority under section 120 to the 1981 effective filing date has been lost.

2) The 557 pages of the 1987 CIP specification describe many 1987 CIP “applications”. While some of these 1987 “applications” are related to 1981 “applications” that were previously described in the discarded 1981 parent specification (e.g. the respective 1981 and 1987 “WALL STREET WEEK” applications), many of the described 1987 CIP “applications” are entirely new (e.g. the 1987 “Exotic Meals of India” application beginning @ line 39 in column 260 of US patent #5,233,654 and the 1987 “Farm Plans of Europe” application beginning @ line 25 in column 295 of US Patent #5,233,654). To the extent that these new 1987 CIP applications effect changes in the substance of the inventions that are now claimed, priority under section 120 to the 1981 effective filing date has been lost.

3) As noted above, some of the 1987 CIP application are “related” to the discarded 1981 applications. The most notable one of the related applications being the respective 1987 and 1981 “WALL STREET WEEK” applications; being that these related applications are most often cited and relied upon by applicants as the basis for claiming section 120 priority to the 1981 effective filing date. Despite the fact that they are “related”, the 1987 CIP “WALL STREET WEEK” application is significantly different from the 1981 “WALL STREET WEEK” application; e.g.

a) The embedded instruct and information signals of the 1987 CIP “WALL STREET WEEK” application utilized discrete 1987 “SPAM” packet structures as the transport mechanism for the long sequences of data that were transported within the video signal in an asynchronous fashion. In contrast, the 1981 “WALL STREET WEEK” application utilized short

discrete codes sequences to trigger/cue certain receiver side actions wherein these short code sequences were transported synchronously within the video signal at one or more discrete "signal word" locations;

b) The embedded instruct and information signals of the 1987 "WALL STREET WEEK" application comprised "computer software" and the instruct and information signals of the 1981 application clearly did not. And, quite obviously, it was the introduction of said 1987 discrete "SPAM" transport mechanism that enabled the long code sequences of the 1987 "software" to be conveyed/transmitted within the video signal;

c) The 1987 overlays that were generated at the 1987 receivers of the 1987 "WALL STREET WEEK" applications were generated by the 1987 microcomputer under control of "computer software" that was downloaded to it as a 1987 "instruct signal" at the beginning of the 1987 "WALL STREET WEEK" program transmission. The 1981 instruct signals, on the other hand, did not carry the "software" and 1981 microcomputers of the 1981 application were therefore **preprogrammed** with said 1981 software;

d) The synchronous nature of the 1981 "signal word" transport mechanism of the 1981 "WALL STREET WEEK" applications has a built in inflexibility due to the fact that the 1981 receivers must be preprogrammed to know in advance exactly where to look within the video transmission, and exactly where to look within one or more specific 1981 "signal word" locations, for the discrete 1981 trigger/cuing codes that it needs to detect. This implicit inflexibility seems to explain why it was the presence/absence of 1981 trigger/cuing code that was used as an on/off switching signal for causing the 1981 microcomputers to begin/cease conveying their locally generated images to an associated TV Sets for overlay with a video thereat. In contrast, the implicit flexibility provided by the asynchronous nature of the 1987 "SPAM" transport mechanism seems to explain why the 1987 "WALL STREET WEEK" application utilized two separate instruct codes to cause the 1987 microcomputers themselves to begin and cease the overlay of the locally generated image upon a received video signal prior to providing the "combined" signal resulting therefrom to a 1987 "video monitor".¹⁷

[SEE: "APPENDIX I" attached hereto]

¹⁷ Note too, that is the 1987 microcomputer of the 1987 receiver which effects the overlay prior to display on the 1987 TV monitor, whereas it was the 1981 TV set of the 1981 receivers which effected the overlay during display.

To the extent that the new 1987 CIP "WALL STREET WEEK" application effects changes in the substance of the inventions that are now claimed, priority under section 120 to the 1981 effective filing date has been lost.

4) Not only has the 557 pages of the instant 1987 CIP specification effected significant changes to the substance of the described invention via the new and related 1987 "applications", but the 1987 specification also effects significant changes to the substance of the described inventions via changes/additions/modifications that have been made to the system structure itself; i.e. a fact that is readily apparent by comparing the figures of the 1987 CIP specification to the figures of the discarded 1981 specification.

To the extent that the new 1987 CIP system circuitry/structure effects changes in the substance of the inventions that are now claimed, priority under section 120 to the 1981 effective filing date has been lost.

X

C. TELETEXT "PRIOR ART":

C-1) When applying “prior art” against pending amended claims, it is both proper and fair for the examiner to draft a rejection based on the ordinary level of skill in the art that existed at the time of applicants’ alleged invention. Being such, when applying the prior art of record against the pending amended claims, it is both proper and fair for the examiner to assume that one of ordinary skill in the art would have understood the way in which “standardized” teletext transmission systems operated to format and distribute “pages” of teletext data through conventional TV networks. Namely, it should NOT be necessary for the examiner to provide teachings in order to explain/evidence the “basics of teletext”, for such basics were notoriously well known and would have been understood by one of ordinary skill in the art at the time of applicant’s alleged invention.

Despite this fact, applicants continues to submit arguments that mischaracterize the way in which “standardized” Teletext systems operated to convey Teletext data through conventional TV networks. Via such arguments, applicants not only impose an unrealistically low level of skill onto section 102 and 103 issues, but applicants effectively place a heavy burden on the examiner to provide an education in what was notoriously well known (i.e. to try to ensure that the teachings/showings of the applied Teletext “prior art” are considered in the context that they would have been read and understood by one of ordinary skill in the art at the time of applicants’ alleged invention). For example, when a piece of applied Teletext “prior art” refers to Teletext “pages”, there should be no need for the examiner to explain what a Teletext “page” is, what the teletext page comprises, and how the teletext page conveys its data/information. Most certainly, one of ordinary skill in the art would have known such facts! To the point:

C-2)

1) “Discrete signals”:

When applicants mischaracterize teletext prior art by alleging that conventional teletext “pages” were not comprised of “discrete signals”, applicants force the examiner to provide explanations and showings that should be unnecessary. This adds an appearance of complexity to rejections made under section 102 and 103 where there should be none. Here, it is interesting to note that much (if not most) of the “prior art” which has been submitted for consideration by applicant during the present prosecution is in fact teletext “prior art”, thereby indicating that the examiner is not the only person who recognizes the significant relationship that clearly exist between “extended” teletext packet systems and the “SPAM” message packet structure of applicants’ own claimed invention(s). In submitting such prior art for consideration, applicant appears to be aware of this significant relationship too.

For clarity of the record:

The examiner maintains that one of ordinary skilled in the Teletext transmission art would have understood that substantially all (if not all) "standardized" Teletext transmission systems operated by:

1) Breaking each complete displayable or non-displayable form of Teletext information down into a plurality of discrete "information portions" that can be conveyed via the available bandwidth;

2) Utilizing "discrete packet signals" to carry these created discrete information portions through a given TV network by embedding each of the discrete packet signals into a respective video line interval of distributed TV programming; and

3) Recovering desired ones of the complete displayable and non-displayable forms of Teletext information on the receiver side of the system via a Teletext decoder that functioned:

a) To receive the distributed TV signals containing the embedded discrete Teletext packet signals;

b) To separate the embedded discrete Teletext packet signals from the received TV signals;

c) To decode the separated discrete Teletext packet signals and to extract those information portions therefrom which correspond to a respective complete displayable or non-displayable form of Teletext information desired by the receiver side of the system;

d) To organize (e.g. re-organize) the extracted information portions so as to recover the desired complete displayable or non-displayable form of Teletext information; and

e) To use the recovered complete displayable or non-displayable form of Teletext information at the receiver side to:

1. Instruct the receiver side of the system as to how to "locally generate" a displayable Teletext image when the recovered information represents a displayable image;

2. Trigger equipment of the receiver side of the system to take certain action when the recovered information represents equipment control signaling;

3. Load a computer/microprocessor at, or within, the receiver side of the system when the recovered information represents "Telesoftware";
4. Identify the TV program and/or the TV network of the programming currently being received; and
5. ETC,...

In the response filed on 1/28/02 in SN 08/470,571, applicant refutes the fact that one of ordinary skilled in the art would have had such a basic understanding of "prior art" Teletext systems. Applicant goes so far as to characterize the examiner's position concerning the inherent existence of "discrete signals" within standardized Teletext transmission systems as only being "hypothetical" in nature [e.g. lines 4-9 on page 356 of the amendment filed 1/28/02 in SN 08/470,571]. The examiner could not disagree more. Hence, via "APPENDIX VIII" of this Office action, the examiner attempts to establish a "floor" below which applicants' erroneous characterizations, misunderstandings, and/or misrepresentations of the conventional Teletext "prior art" should not be allowed to sink. ^{18 19 20}

¹⁸ The 1979 publication entitled "THE CONCEPT OF A UNIVERSAL 'TELETEXT' (BROADCAST AND INTERACTIVE VIDEOTEX) DECODER, MICROPROCESSOR BASED" by Marti is also cited for its showing and descriptions of "universal" videotex decoder structure and processing [e.g. NOTE: The description under the heading "2-POSITION OF THE PROBLEM" on page 1 of the publication; figure 3; etc,...].

¹⁹ The 1980 publication entitled "Broadcast Text Information in France" by Marti is cited for its brief description of teletext packet structure [note lines 2-14 on page 361].

²⁰ Note too the summary of "well known" teletext packet structure in lines 11-22 in column 1 of US Patent #4,660,202 to Woodsum.

C-3)

2) "LOCALLY GENERATED":

Applicants continue to allege that displayed teletext images are not "locally generated" images. The examiner disagrees and, again, notes the following:

1) Teletext transmission systems conventionally comprised:

a) At least one teletext editing terminal that was located on the transmission side of the TV network; and

b) A plurality of teletext decoders that were located within respective TV receivers (or attached thereto) on the receiver side of the TV network.

Each teletext editing terminal and each teletext decoder conventionally comprised a memory that stored randomly accessible display data representing a limited repertoire of displayable character/graphic fonts and symbols.

At the editing terminal, a teletext editor created each page of teletext data by entering a sequence of commands into the editing terminal, wherein the entered sequence of commands defined an instruction set which told the editing terminal as to how to select, assemble, and display pluralities of the stored character/graphic fonts and symbols so as to "generate" a desired teletext image. Once the desired image was completed, the teletext editing terminal operated to store data representing the so formulated instruction set as a respective teletext page (the "generated" teletext images themselves were not stored). A teletext scheduling terminal was then used to schedule the cyclical transmission of ones of the stored instruction sets, i.e. teletext pages, over the TV network.

On the receiver side of the TV network, each user inputted "user specific" data, e.g. user selected teletext page numbers, into their respective teletext decoder that was then locally stored within the decoder. This locally stored user specific data identified the teletext page or pages that were to be displayed by the respective TV receivers. In response to the stored page numbers, each teletext decoder searched through the cyclically transmitted instruction sets to find the instruction set that was labeled with the page number that corresponded to the locally entered and stored page number. Once detected, the discrete packets of the instruction set were captured, organized, and stored within the decoder. The captured and stored instruction set was then "executed" by decoder in

order to instruct the decoder as to how to select, assemble, and display pluralities of the stored character/graphic fonts and symbols from its own locally stored repertoire *in order to "locally generate" the desired teletext image that was to be displayed.*

The accuracy of the examiner's position, concerning the fact that teletext page data represented instruction that teletext receivers/decoders executed in order to "locally generate" their displayed teletext images, is evident in the prior art of record:

"The first step in teletext service is the translation by a teletext editor of text, pictorial information and display attributes (such as color, flashing characters and so on) into a series of instructions to be transmitted to the teletext decoder. The instructions for each page in the teletext 'library' are then broadcast continuously on a revolving basis by multiplexing the data into the vertical blanking interval. The user accesses a desired page of teletext information by entering the page number, e.g. by pressing the appropriate buttons on a control unit. The teletext decoder then selects the page from the revolving transmission, stores the coded information in memory, processes that information to the extent necessary for display, and produces the page on the television screen. Where captioning is transmitted, the decoder will superimpose the captioning over the normal television picture" (emphasis added)

[Page 5 of the 3/26/1981 "Petition For Rulemaking" file with the FCC by the United Kingdom Teletext Industry]

"[Videotex] data transmitted do not represent directly the picture which is generated in the receiver, but encoded instructions to the receiving decoder"

[Lines 8-10 under the heading "1-Scope" on the first page of the article "The Concept of a Universal 'Teletext' (Broadcast and Interactive Videotex) Decoder, Microprocessor Based]

"The [teletext] receiving equipment can be conventionally thought of as consisting of three sections: a) signal acquisition, b) memory, c) display generation. The signal is acquired and suitably processed before being loaded into memory. Memory is repeatedly accessed by the display generation section to obtain the instructions which direct it to create the images of alphanumeric and graphic characters and place them on the screen" (emphasis added)

[The first paragraph under the heading "Receiving Equipment Options" on page 539 of the 1980 article "THE ROLE OF THE TELEVISION RECEIVER MANUFACTURER IN THE UNITED STATES" by Ciciora et al.]

"It must be clearly held in mind that the [teletext] image displayed on the CRT *is synthetic video and that the synthesis is done locally*" (emphasis added)

[The first two lines under the heading "Synthetic Video" on page 545 of the 1980 article "THE ROLE OF THE TELEVISION RECEIVER MANUFACTURERE IN THE UNITED STATES" by Ciciora et al.]

"In a picture display device for displaying a mixed picture signal which signal comprises a conventionally received television

picture signal and a *locally generated signal, such as a teletext sub-title...*"

[The first 6 lines in the abstract of GB 2,062,401 patent document to Korver]

"Picture display devices of such type, have a picture screen on which a mixed picture signal can be displayed are known. By means thereof pictures can be displayed in which *locally generated* characters, drawing elements and similar items can be superimposed on a normal picture, for example a moving picture transmitted, for example, by a transmitter and received in a conventional manner. *Such a signal can be generated by, for example, a teletext decoder in the display device*" (emphasis added)

[The first paragraph under the heading "Background of the Invention" in column 1 of US Patent #4,347,532 to Korver]

C-4)**3) Computer implemented teletext decoders:**

A) At the time of applicants' alleged invention, it was notoriously well known in the art to have implemented "basic" level teletext decoding circuitry, i.e. decoding circuitry that was capable of providing basic teletext decoding features, using dedicated logic circuitry [NOTE: figure 1 of Barnaby (U.S. Patent #3,982,064)]. The implementation of *basic* level decoders using dedicated circuitry was recognized as being practical given its low unit "cost"; i.e. such decoders were inexpensive to produce.

While not required/mandatory, at the time of applicant's alleged invention, it was also notoriously well known in the art to have implemented even said "basic" level teletext decoding circuitry using a software driven "computer" in place of some or all of the dedicated logic circuitry [Note: lines 50-54 on page 1 of Betts (GB # 1,556,366); and, Compare figure 1 of Betts (GB #1,556,366) to figure 1 of Barnaby (U.S. Patent #3,982,064)]. The computer implementation of teletext decoders was recognized as having been advantageous/desirable over dedicated circuitry implemented decoders due to their inherent flexibility [e.g. 70-73 on page 1 of Betts (GB # 1,556,366)].

In fact, the computer implementation of the teletext decoder was known to have been required/"mandatory" when implementing "advanced" level decoders capable of providing *advanced* teletext decoding and display features [e.g. note section 5.3.1.3 of the "EIA Systems Analysis Chart" (revised as of August 20, 1981)]. The additional cost of the computer implemented teletext decoder was even deemed "appropriate" at the time of applicant's alleged invention with regard to "intermediate" level teletext decoders [e.g. note section 5.2.1.2 of the "EIA Systems Analysis Chart" (revised as of August 20, 1981)].

B) Figure 3 on page 365 of the 1980 article "Broadcast Text Information in France" by Marti is described as being an illustration of: "The general structure of an Antiope receiver". As illustrated, the "decoder" within the "general structure" of the Antiope receiver was implemented using a software driven computer (i.e. the illustrated "microprocessor").

C) Figure 3 of 1979 publication entitled "THE CONCEPT OF A UNIVERSAL 'TELETEXT' (BROADCAST AND INTERACTIVE VIDEOTEX) DECODER, MICROPROCESSOR

BASED" by Marti is described as being illustrative of: "Structure of a 'universal' videotex decoder". As illustrated, the "processing unit" of the "universal" decoder structure comprised a software driven computer (i.e. the illustrated "microprocessor").

[Here, it is also significant to note that Marti explicitly indicates that the software used to program the "microcomputer" could be provided and loaded into the universal decoder "from a line (broadcast or telephone)" [see the paragraph in lines 22 on page 6 of this publication]].

C-5)**4) The "Mixed" display mode:**

A) It was notoriously well known by those of ordinary skill in the Videotex art, at the time of applicants' alleged invention, that Videotex transmission systems encompassed two components: 1) A one-way teletext system component; and 2) A two-way viewdata system component.

"Videotex has two distinct forms of information transmission - Teletext and Viewdata. Teletext is the transmission of textual data and graphics to a consumer adapted television set using broadcast transmission techniques. Viewdata is the interconnection of a home terminal device to a host computer via narrow band transmission facilities, such as a telephone line.

Although Teletext and Viewdata display information on a consumer TV screen in similar fashion, they have managed to evolve separately. Each of the two techniques has its own advantages and disadvantages. In Teletext, data is sent as a recirculating data stream. The amount of data stream is limited only by the number of transmission scan lines available for data transmission and the predetermined acceptable latency between page selection and display. Viewdata provides almost instant access to a large number of display pages with minimum access time. However, because it is similar to a timesharing service, telecommunication and computer port requirements have high associated cost burdens."

[Pages 14 and 15 of the article "Videotex Services via CATV - Hybrid Systems Approach" by Dages].

B) At the time of applicant's alleged invention, it was notoriously well known in the Videotex art for Videotex display devices to have provided a **"mixed display mode"** in which Videotext image data was simultaneously displayed, as an overlay or inset, within the video component of received TV programming. Such a state of the art is clearly established via the following citations:

1) That which occurs when signal V2 is selected for display via button 16 of the remote control unit 9 shown in figure 4 of Oono et al. [JP 55-028691];

2) That which occurs when a combined signal is selected via selector switch "S" that is shown in figures 2 and 3 of Yokoyama [JP 54-154215];

3) That which occurs when input "2" of switch "3" in figure 4 of Hutt et al. [US #3,961,137] is selected for output;

- 4) That which is described in lines 29-44 on page of Turner [GB Patent #1,486,424;
- 5) That which is described in the last paragraph on page 356 of the article entitled "Teletext/Viewdata LSI" to Harden;
- 6) That which is described in lines 40-45 of column 4 of Ciciora [US Patent #4,233,628].

C) During the present prosecution, applicants' have alleged that said well known a **"mixed display mode"** of Videotex pertained only to the teletext form of Videotex and did not pertain to the Viewdata form of Videotex. The examiner maintains that applicants' allegation is erroneous. That is, while the **"mixed display mode"** of Videotex is often described in the prior art with respect to the teletext component of Videotex given the fact that Teletext often carried "program related" information requiring simultaneous display, those of ordinary skill in the art recognized nonetheless that the **"mixed display mode"** of Videotex was applicable to the Viewdata form of Videotex too. This fact is evident in the following citations:

- 1) The first three lines on page 11 of the PTO provided Tsuboka et al. translation [JP 55-45248] evidences the fact that the **"mixed display mode"** of Videotex systems were known to have applied to the display of the Viewdata component of Videotex too;²¹
- 2) While the display mixed display mode described in lines 40-45 of column 4 in Ciciora [US #4,233,628] was described with respect to teletext data display, Ciciora explicitly indicated that this teletext display process described therein had equal applicability with respect to Viewdata display too [e.g. lines 46-52 of column 2];
- 3) The article "Teletext/Viewdata LSI" by Harden:
 - a) Described the system of figure 2 which was capable of receiving and displaying Teletext data or Viewdata data, wherein the circuitry of figure 2 comprised:
 1. The illustrated "DATA ACQUISITION" chip (shown in detail in figure 3);

²¹ "A display switching circuit 29 is a circuit which switches or superimposes a television signal demodulated by the color demodulation circuit 21 to/on the aforesaid character pattern display signal. By switching these signals, a conventional television broadcast may be switched to or superimposed on a character pattern information service broadcasted or sent over a telephone circuit, and displayed on the CRT 31"

2. The illustrated "STORE"/ RAM; and
3. The illustrated "Video Generator" chip (shown in detail in figure 4).

b) Explicitly stated that once the Teletext and/or the Viewdata had been acquired and loaded into the "store"/RAM, the video generation and display by the Video Generator chip could proceed without knowledge as to whether the data being processed was acquired from the Teletext source or the Viewdata source [e.g. the first paragraph under the heading "II. Video Generator" on page 356 of the publication]; and

c) Explicitly stated:

1. That the "Video Generator" chip had the **"ability to display both text and picture [at] the same time"**; and
2. That **"if the TV circuitry is fast enough a MIX mode will enable all characters to be inset into the TV picture"**.

[SEE: the last paragraph on page 356].

Clearly, the above noted descriptions in Harden, indicated:

- 1) That once acquired and stored, captured Viewdata data and Teletext data were, or at least could be, processed and displayed in like fashion by the Video Generator, wherein the video generator was described as having had the ability to display both text and video at the same time; and
- 2) That, in any event, **"all"** text data that was produced by the Video Generator, regardless of source, could be displayed in a "mixed" mode provided that the (switching) circuitry of the TV was fast enough.

D) On a more general note, the examiner maintains that it was notoriously well known in the art that TV receiver circuitry that was configured to operate in a **"mixed display mode"** were known to have been advantageous in that they permitted the display of auxiliary information (i.e. be it videotext data, computer data, auxiliary video information, on-screen display, etc,...) without interruption to the content of TV programming currently being viewed by the viewer [e.g. note, for example, lines 68-80 on page 4 of Yoshino et al. (GB 1,405,141)].

X

D. ADDITIONAL ISSUE:

D-1) The “Software” Issue:

A) The examiner notes that applicants instant 1987 CIP specification describes at least one embodiment of invention that used signaling, embedded within the VBI of TV programming, to download computer software to the ultimate receiving stations in order to have programmed/reprogrammed the station on the fly [note pages 20-27 of the instant 1987 CIP specification]. Throughout much of the present prosecution, applicants have alleged that the past 1981 parent specification implicitly described this same downloading of computer software via the 1981 “instruction signals” of the 1981 inventions that were embedded within the VBI of the 1981 TV programming. The examiner maintains that applicants’ allegation is untrue for reasons that have been addressed throughout the record [SEE: Appendix IV of this Office action].

Now, within the “Declaration of Dr. George T. Ligler” filed with the response of January 31, 2003 in application #08/487,526, applicants’ expert comments on this issue stating that the examiner has “overlooked” the fact that the 1981 specification explicitly states that the ultimate receiver station of the 1981 inventions might be “reprogrammed” from a remote location via a telephone line. The following is noted:

i. The fact that the 1981 specification taught that the 1981 receiver stations might be reprogrammed from a remote location over a telephone line has absolutely nothing to do with the examiner’s longstanding position that the 1981 specification does not teach the downloading of software via the 1981 “instruction signals” that were embedded in the VBI of the 1981 TV programming. Clearly, the comment made by applicants’ expert does not address the issue that it purports to address. If, however, the expert’s position is representative of the kind of “dual” 112 support that he (and applicants) are still relying on for proof of “priority” under section 120 (i.e. that the 1981 description of reprogramming a receiver via a telephone line allegedly provides “priority” to the 1981 filing date for claims directed to the 1987 downloading of software via the embedded SPAM signaling), then the examiner cites it as another example of the diverse nature of the subject matter from the respective 1981 and 1987 CIP specifications that is being relied upon by applicants to allege, and attempt to obtain, the 1981 effective filing date for the 1987 subject matter that is now being claimed (i.e. further evidence that applicants have indeed confused “anticipation” under section 102 with the adequate written description requirement of section 112 that has been incorporated into section 120); and

ii. The 1987 CIP specification explicitly describes at least one embodiment of invention where the 1987 ultimate receiver station was reprogrammed on the fly, e.g. during a TV program, via instruct signaling embedded therein. The statements from the 1981 specification that have been cited by applicants’ expert only indicate that that the 1981 receiver stations were capable of being

"reprogrammed" from a remote location via the telephone line, but it does not appear to give any indication whatsoever as to when this 1981 reprogramming process was to have occurred. That is, the cited 1981 teachings do not state or describe and embodiment in which the 1981 reprogramming of receivers occurred "on the fly" as applicants' expert suggests.²² To the contrary, these cited 1981 teachings might only have been an indication that the 1981 receiver stations could be remotely initialized in the presence of a technician during installation and/or in the presence of a technician during a service "tier" modification - (who knows?). It appears that the expert has improperly imparted specific meaning/"purpose" to the cited 1981 remote "reprogramming" descriptions when in fact the 1981 descriptions were themselves silent as to such meaning/purpose (i.e. the specific meaning/"purpose" imparted onto the 1981 teachings by the expert appears to be speculation improperly imported back into the 1981 descriptions from the 1987 CIP). The examiner maintains that it is improper for applicants (or their expert) to read and/or import specific meanings that may be reasonably inferred from teachings of the 1987 CIP specification back into lesser teachings of the 1981 specification that do not reasonably infer these same meanings. Certainly, teachings imported into the 1981 parent specification from the 1987 CIP specification cannot legally serve as a basis for priority to the earlier effective filing date under section 120.²³

²² Due to the synchronous nature of the 1981 "signal word" structure, it would appear that all of the receiver stations of the 1981 networks would have had to be reprogrammed with new detection "patterns" so as to know where and when to look for the instructions/information directed thereto whenever the content of the "words" was changed, thereby making the process of reprogramming the 1981 receivers "on the fly" a major undertaking (if possible at all within the allotted time). In any event, nowhere within the 1981 specification was such reprogramming on the fly ever described or suggested.

²³ The instant examiner continues to struggle with this issue. Clearly, the "new" 1987 CIP specification explicitly changes and/or expands the terms and teachings of the 1981 parent specification. In claiming a 1981 effective filing date for claims that necessarily derive their required section 112 support solely from these changed and expanded 1987 CIP disclosures, it appears to the instant examiner that applicants' are effectively transporting the changed/expanded 1987 CIP subject matter of the instant claims back in time to the 1981 date (i.e. effectively importing this changed/expanded 1987 subject matter back into the 1981 specification). This seems to be the reason why applicants have found it necessary to argue again and again, e.g. throughout the course of the present prosecution, that "common subject matter" is not a requirement of section 120 (i.e. rather than explaining where the claimed subject matter is disclosed in both applications and why this subject matter does in fact constitute "common subject matter").

D-2) THE “MODE II” CAPTIONING FEATURE OF “ANTIOPE”:

1) Those of ordinary skill in the art, at the time of applicant's alleged invention, had recognized that there was a need and desire to transmit closed captioning data pertaining to multiple different languages within each TV program transmission. Because teletext captions had to be transmitted sequentially through the TV network, it was found to be difficult to simultaneously synchronize the display of all the different captions/languages to the same TV programming. Hence, a “Mode II” captioning feature was developed and added to new teletext “standards” (e.g. ANTIOPE) for the expressed purpose of simultaneously synchronizing multiple captions to the same program.

“The possibilities of teletext closed captioning for the hearing-impaired and for foreigners are well known and were first experimented in the United Kingdom. The problem of synchronizing the TV program and the captions was not really solved, except at the price of heavy time delay constraints. If several different languages are to be captioned at the same time with a given program, new developments are needed, because asynchronism appears for multilanguage captioning applications. The new standards make it very simple to add sophisticated captioning options to a normal teletext decoder: in this new process, the synchronism control signal are completely separate from the ‘character attributes’ - they are actually considered as a ‘message attribute’.

[e.g. section 5.1.3 on page 33 of the 3/1980 publication “Development & Application of the Antiope-Didon Technology]

2) The way in which these “new” teletext standards solved the synchronism problem seems best explained within the prior art of record by the “CBS/CCETT NORTH AMERICAN BROADCAST TELETEXT SPECIFICATION (EXTENDED ANTIOPE)” which is dated May 20, 1981. [SEE: sections 7.0-7.3 on pages 135-138; and sections 8.9.1 to 8.9.2.2.2 on pages 159-162]. That is, as explained within this publication:

a) Different classes of captioning (and different levels thereof) were transmitted from the transmitter as conventional teletext pages prior to the time that they were to be displayed;

b) Each receiver captured and stored (but did not display) the page of teletext data which corresponded to the class (and the level) of captioning that was selected and desired by the user;

c) At the desired time of display, a "reveal"/"unmask" message was transmitted from the transmitter station which caused/triggered the stored captions at the respective receivers stations to be simultaneously outputted and displayed in precise synchronism with the TV programming.

That is, the Mode II captioning feature provided the mechanism by which multiple program related messages/captions could now be transmitted sequentially and asynchronously within the TV programming, while enabling each of these sequentially transmitted captions to be displayed simultaneously and in precise synchronism with the same TV programming at different receiver stations in response to the receipt of the same reveal/unmask display signal.

"Through use of the "Y" bytes, program related pages can also be transmitted. Program related pages are those pages that are transmitted with a television program and are intended to be a complement to the television program. One example of a program related page is captioning"

"Captioning is a program related teletext message that is transmitted to the decoder and superimposed over the program video at a pre-designated time. The captioning message functions in a manner similar to a normal teletext message except that instead of having to select each page individually the user selects a classification of caption and a level (from 1 to 9) and the decoder automatically displays and erases the appropriate captions at the proper times.

In the case of captioning the session level identifies the fact that the message is a captions. A caption message is characterized by the fact that it is displayed, not over a blank screen, as in the case of normal teletext, but rather over program video. Depending on the decoder manufacturers' option, the caption may be displayed keyed over the video or inserted into the video in a box.

Captions are transmitted to the decoder with a bit in the header set so that the caption is captured and put into memory but not displayed. This way many different versions of the same caption may be sent and each decoder can capture the version it chooses. When the caption is to be displayed a simple control packet is sent with the caption type designator equal to the caption to be displayed along with a reveal bit. This causes the caption to be displayed over the program video. To erase the caption another message is sent to the decoder telling the decoder to erase the page and wait for the next caption"

It is noted that similar descriptions of this Mode II captioning feature can be found elsewhere in the prior art of record too; i.e. for example, as provided in sections

7.11.2.2 and 7.11.2.3 on pages 72 of Appendix B in the petition filed with the FCC by CBS on 7/29/1980.²⁴

"When many captions are sent, at various levels and in various languages, forming classes, all varieties for a given class of captions are sent far enough in ahead to allow the decoder to store the one selected. The Y caption flag (Y1, b6=1) is raised on each one, implying transparent background and suppress page display. The conceal flag (Y1, b8=1) should also be raised. After all varieties of a given caption are sent, one additional record is sent with the conceal flag low [(equal reveal) Y1, b8=0]. This single command causes all decoders which have been storing a class of captions to display it. This last command is seen by all decoders, regardless of what page number they may have been instructed to look for because this page has not number and has the alarm flag raised in the Y's (Y1, b8=1)."

"To remove a class of captions and leave a blank screen, an alarm page is sent with the conceal flag raised, (Y1, b8=1)."

3) The 8/1980 publication "ANTIOPE TELETEXT CAPTIONING" also describes this same "MODE II" captioning feature of the ANTIOPE teletext standard. This publication has been cited in response to arguments that have been submitted by applicants throughout the present prosecution.²⁵ Namely:

a) This publication makes it clear that the "MODE II" captioning feature of ANTIOPE utilizes the same teletext equipment that is used for the teletext service itself being that the captions are transmitted as standard teletext pages.

"When Antiope is employed for captioning, it uses the same equipment as for teletext" (the second column of page 618)

"Each caption is broadcast in the form of a page which is identical to a teletext page. The page number is used to select the language – this is the number the user keys on the decoder

²⁴ Additionally, note sections 7.1.2 to 7.1.2.4 for systems "A" and "C" of the "EIA Systems Analysis Chart" (revised 8/20/1981).

²⁵ E.G., applicants' have attempted to distinguish the claimed invention over applied teletext prior art by arguing that the signals of teletext are not conveyed within pluralities of discrete packet signals that, therefor, must be assembled/re-assembled on the receiver side of the network. As is evident from the cited prior art, applicants' argument is simply untrue (i.e. even the shortest of teletext messages were conveyed within a plurality of discrete teletext packet signals).

keypad. The operation is the same as for the selection of a teletext page; the decoder functions are identical" (the first column of page 619)

b) This publication makes it clear that all the teletext pages of the ANTIOPE standard were transmitted within the "discrete teletext transport packets" of the DIDON standard and that even the shortest of the captions (i.e. the word "yes") had to be transmitted using more than one of these discrete DIDON transport packet.

"The word 'yes', wherever it is located on the screen, if it is white on black, is coded in 23 bytes (i.e. 1.15 DIDON packets), and text containing 40 characters requires 60 bytes (i.e. 3 packets)" (the second column on page 619)

c) This publication re-emphasizes that it was the ability of the ANTIOPE system to mask (conceal) and unmask (reveal) teletext messages which enabled the ANTIOPE system to separate the act of transmitting messages/captions from the act of displaying them (i.e. a key feature that is vital to the implementation of the MODE II captioning).

"Considerable flexibility is also given by the use of text masking and unmasking attributes. They enable us to differentiate reception, which can be stored, from display, which is requested a particular moment without being dependent on the time of transmission" (page 619)

.....

[In applicants' "WALL STREET WEEK" application, a "command signal" was embedded, at a specific time, within the "Wall Street Week" TV program being broadcast from a transmitter station. At each receiver station, said "Wall Street Week" program was received and the "command signal", embedded therein, was detected. At each receiver station, the detected "command signal" triggered a locally generated user specific graphic to be displayed as an overlay over the displayed video portion of said received "Wall Street Week" program. Thus, via the embedding of a single "command signal", the display of different locally generated user specific overlays at different receiver stations were all "synchronized" to occur at said specific time within the "Wall Street Week" program.

As is evident from the prior art of record, the MODE II caption feature of the ANTIOPE teletext standard also utilized a single common display "command signal" to cause different "locally generated" program related teletext images/captions to be simultaneously overlaid at respective TV receiver stations in precise synchronism with the TV programming to which they relate.

Namely, in mode II captioning, reveal/unmask "command signals" were embedded, at specific times within, a transmitted TV program being broadcast from a transmitter station. At each receiver station, said program was received and the reveal/unmask "command signals", embedded therein, were detected. At each receiver station, each detected reveal/unmask "command signal" triggered a locally generated user specific graphic (e.g. a respective "program related caption") to be displayed as an overlay over the displayed video portion of said received TV program. Thus, via the embedding of each reveal/unmask "command signal", the displays of different locally generated user specific program related messages/captions/overlays at different receiver stations were all "synchronized" to occur at the specific times within the TV program. ^{26]}

²⁶ Applicants' have attempted to distinguish the overlays of their "Wall Street Week" application from the "program related captioning" overlays of ANTIOPE's mode II captioning feature by arguing that teletext images/captions are not "locally generated" at the receiver. For the reasons discussed above in paragraph C-3 of this Office action, applicants' arguments are simply erroneous and misplaced.

D-3) "INTERACTIVE" TV:

1) The Interactive System of U.S. Patent #3,008,000 to Morchand:

As is illustrated on the cover page, Morchand disclosed an interactive multi-channel TV system that comprised:

a) A plurality of TV stations (12-1 to 12-N) for transmitting respective TV signal segments/fragments which, taken together, represent the complete interactive TV program; and

b) TV receiver stations each of which includes:

1. A TV tuner (@ 18A) for receiving selected ones of the program segments/fragments;

2. An audio display device (@22) for outputting the audio component of each selectively received program segment/fragment;

3. A video display device (@ 42) for outputting the video component of each selectively received program segment/fragment; and

4. Dedicated control circuitry (@ 18B, 26, 28, and 30) for controlling the TV tuner to sequentially select the program segments/fragments that are to be received based:

a. Control information that is embedded in the active video portion of TV programming segments/fragments (as detected/determined @ 40A-40n); and

b. User responses entered @ 44a-44n.

The result being a system in which each of the receiver stations, under control of dedicated circuitry, interactively "branched" through a selected sequence of the available program segments/fragments, comprised of multi-channel TV signal segments/fragments, based on a respective user's specific inputs/responses, thereby interactively producing a user specific multimedia (i.e. audio/video) presentation.

2) The Interactive System of U.S. #3,245,157 to Laviana:

Laviana disclosed an interactive TV system that comprised:

a) A transmitter station (not shown) for emanating interactive programming comprised of a plurality of program segments/fragments wherein, as illustrated in figure 1, the program segments/fragments comprised:

- 1) A common video signal portion for providing visual information; and
- 2) One or more audio signal portions providing a plurality of audio channels; and

b) At least on receiver station comprised of:

- 1) A TV receiver (@ 16) for receiving and displaying the common video signal;
- 2) Decoder circuitry (@ 18) for receiving the one or more audio signal portions and for locally "retransmitting" the plurality of audio channels provided therein as separate audio transmissions; and
- 3) And a plurality of user controlled devices (@ figure 2) each of which includes:
 - a) Input keys for allowing the respective user to input responses to received/displayed program segments; and
 - b) Receiving/tuning circuitry that, based on the user inputs/responses, selects and/or tunes to the one of the retransmitted audio channels which provides further information (i.e. an aural "explanation") pertaining to the user's input/response.

In Laviana, the separate audio transmissions were described as comprising separate radio transmissions requiring the user controlled device to have comprised one or more tuners for selecting the appropriate audio segment/fragment [e.g. lines 2-24 of column 4].

3) The Interactive System of D.E. Patent Document #2,904,981 to Zaboklicki:

Zaboklicki discloses and interactive TV system for transmitting and displaying complete interactive TV programming comprised of TV signal segments/fragments. Zaboklicki explicitly described two types of interactive programming:

- a) Interactive programming that is to be watched by a plurality of viewers at each receiver location wherein, as in the case of Laviana above, the interactive programming was comprised a common video portion and a plurality of audio channel portions [e.g. "sports and entertainment" programs]; and
- b) Interactive programming that is to be watched by a smaller number of viewers at each receiver location wherein, as in the case of Morchand above, the interactive programming was comprised pluralities of multi-channel video segments/fragments in addition to the plurality of audio channel portions [e.g. "educational and popular science broadcasts" programs].

That is:

A) As in the case of Laviana, Zaboklicki discloses an application of his invention in which each receiver station displayed a common video portion

and, in response to user inputs, selected and/or tuned to ones of the plurality of audio channel signals. The plurality of audio channels were described as having been "transmitted analogously to the known signals of foreign language translations ***on audio channels or radio channels***" (emphasis added); and

B) As in the case Morchand , Zaboklicki also disclosed an interactive multi-channel TV system application of his invention. However, the system disclosed by Zaboklicki was significantly enhanced relative to the system disclosed by Morchand. The following is noted:

- a) In Zaboklicki, the segments/fragments of the complete interactive TV programs were not limited to TV signal segment/fragments as in Morchand, but included program segments/fragments of other sources and types such as:

1. Pages of teletext data;

2. Supplemental/Auxiliary audio signal components;
3. Locally stored video information;
4. Etc, ...

b) In Zaboklicki, the control information was not conveyed as mere modulations within the active image portion of the TV programming segments as in Morchand, but was conveyed as "Telesoftware" (i.e. computer software) via the pages of an embedded Teletext service;

c) In Zaboklicki, the control circuitry was not implemented merely using dedicated circuitry as in Morchand, but was instead comprised of:

1. A teletext decoder (@ 56 of figure 3); and
2. A software driven CPU (@ 6,7, 39, and 49 of figure 3) that was programmed, on the fly, via software (i.e. said "Telesoftware") that was downloaded to said CPU from the transmitter via pages of said Teletext service that was embedded within the VBI of the interactive programs TV signal segments/fragments;

d) In Zaboklicki, a telephone line was utilized as a return link whereby a recorded record of a user's inputs/responses could be transmitted to a remote collecting station (see figure 4).

The result being a system in which the CPU (6) of each receiver station operated, under control of the downloaded Telesoftware, to interactively select and display a sequence of the available program segments/fragments (i.e. which segments/fragments included teletext images, secondary audio signals, and multi-channel TV signals), based on the specific responses that are inputted by the respective user to thereby create, interactively, a user specific *multimedia* presentation. That is, in Zaboklicki, the downloaded Telesoftware provided the CPU with the "instruction"/script that it needed to follow in order to have identified, selected, and displayed each "next" program segment/fragment from the user's specific response to each "current" displayed segment/fragment. That is, at any branch point within the interactive program, the CPU of each Zaboklicki receiver station had to have determined where in the script it was, i.e. it must have had some way of knowing/determining "content" of the segment/fragment currently being displayed, for it to have

identified the next segment/fragment that had to be interactively selected and displayed as a result of the specific response inputted by the user; i.e. hence the described segment/fragment identifiers of the Zaboklicki disclosure.

4) The Interactive System of U.S. Patent #4,413,281 to Thonnart:

Thonnart also disclosed an interactive TV system. The interactive TV system disclosed by Thonnart has many similarities to the interactive system that was described by Zaboklicki. The following is noted:

a) In Thonnart, the program segments/fragments of the complete interactive TV programs included:

1. Pages of digital teletext data;
2. Analog audio signals; and
3. Analog video signal representing sequences of still video frames;
4. Etc, ...

b) As in Zaboklicki, in the system disclosed by Thonnart segment/fragment "identifiers" were added to segments/fragments of the interactive program

to enable the receivers to identify the receipt of those which needed to be selected and displayed [note claim 1];

c) As in Zaboklicki, in the system disclosed by Thonnart:

1. Command logic sequences (i.e. "software") were generated at the transmitter [e.g. lines 37-46 of column 2];
2. Said command logic sequences were downloaded to the receiver station, as part of the digital data stream, with priority over the teletext data [e.g. lines 5-13 and 25-32 of column 4];
3. Said downloaded command logic sequences were received and stored within a logic memory (27) of the receiver stations [lines 33-40 of column 4]; and
4. Said stored logic sequences (i.e. software/"programming") were then executed by the receiver stations to control the selection and

display of the program segments/fragments, based on the user's inputs, to generate a multimedia user specific interactive presentation [e.g. lines 41-58 of column 4; lines 37-45 of column 2; etc,...]; and

d) In Thonnart, the digital and analog segments/fragments of the complete interactive program could be transmitted to the receiver station over respective/separate/different channels wherein, in such cases, the receiver stations would require respective/separate/different tuners so that the analog and digital segments/fragments could be received in simultaneously (i.e. in parallel) [note lines 14-24 of column 4];and

e) In Thonnart, the page of teletext data were displayed either in sequential fashion or simultaneous fashion with respect to the video still frames (see claim 1).

5) The Interactive System of D.E. Patent Document #2,550,624 to Haefner et al.:

Haefner et al. also disclosed an interactive TV system. As with Zaboklicki, the receiver station circuitry was controlled by a software driven processor (@ 13 of

figure 2) which received the software from the transmitter station. However, in Haefner et al., all of the program segments/fragments of the complete interactive TV program, e.g. including the TV signal program segments/fragments, were

downloaded and stored on a random access storage medium of the receiver station in advance of the user interaction, thereby eliminating the need for (and use of) dedicated TV transmission channels as utilized in the multi-channel systems of Zaboklicki and Morchand. That is, instead of controlling the tuner of the TV receiving circuitry to tune to the respective TV program segments/fragments that were to be selected and displayed, the computer (13) in Haefner et al. controlled its receiver to retrieve the respective program segments/fragments that were to be selected and displayed from said random access memory medium.

X

E. DETAILED OFFICE ACTION:

E-1) THE SECTION 120 PRIORITY ISSUE:

a. Contrary to applicants' recent objections, it was applicants who first introduced "blanket statements" into the record alleging that many of their 328 bulk filed related applications (i.e. all claims contained therein) were entitled to the 1981 effective filing date of their 1981 parent application under section 120.

b. In order to "prove" that these claims were entitled to the 1981 effective filing date, and to respond to section 112-1 rejections made by the Office, applicants initially alleged it was "clear" from "the law" that they only needed to show that each claim in question was supported in accordance with the requirements of section 112-1 by the disclosure of the 1981 parent specification alone. The Office was initially misled by applicants' allegation accepting it as truth.

c. Eventually, however, the Office realized that applicant's position concerning "the law" was both erroneous and flawed. That applicants' sole reliance on the 1981 parent disclosure for addressing both section 112 rejections and section 120 priority issues might have been correct had the disclosure of their 1981 parent application not been *discarded* at the time the 1987 CIP was drafted and filed; i.e. had the 1981 specification been formally "incorporated" into the 1987 CIP specification of applicants' 328 bulk filed applications. But the 1981 disclosure was not formally incorporated into the 1987 CIP specification and, because it was not, the Office realized that applicants:

i. Could (and still cannot) rely on the 1981 specification at all for rebutting section 112 rejections because, by law, section 112 support for the claims must come from the "instant specification" on which the claims depend. The "instant specification" is the 1987 CIP specification alone being that the 1981 parent specification was never incorporated therein; and

ii. Could (and still cannot) rely on the 1981 specification alone to establish section 120 priority to the 1981 filing effective date for that which is claimed because each of the instant claims is only entitled to section 120 priority if it recites "common subject matter" wherein, under the present circumstances, "common subject matter" is:

(1) That 1987 subject matter which is described and claimed within the instant 1987 CIP specification in accordance with all of the requirements of section 112; wherein the "instant specification" is the 1987 CIP specification **alone** because the 1981 parent specification was not incorporated therein; and

(2) That **same** claimed 1987 subject matter that can be shown, by applicants', as having been previously described in the past 1981 parent specification in accordance with all of the same requirements of section 112.

d. Given this “new” realization, the Office challenged applicants’ notion that “the law” allowed the section 112 rejections and the section 120 priority issue to be addressed using the 1981 parent specification alone or even at all. In response to this challenge, applicants’ conceded that that section 112 rejections must be addressed using the instant 1987 CIP specification alone. With respect to the section 120 priority issue, however, applicants only conceded that some type of “dual” section 112 support from the respective 1981 and 1987 CIP disclosures was necessary, however, applicants outright refuted the position taken by the Office that this required “dual” section 112 support must be provided by any kind of “common subject matter”.²⁷

e. Then, within ones of the bulk filed applications, applicants began submitting a chart that identified “correlated” subject matter that existed between the 1981 and the 1987 specification. Applicants also began submitting claim charts for establishing alleged “dual” section 112 support for the claims from both disclosures wherein these claim charts which appeared, for the most part, to regurgitate the information that was contained in the correlation chart on a claim-by-claim, limitation-by-limitation, basis.

f. In response to these submissions, the Office pointed out that the respective “correlated” citations from the 1981 and 1987 specifications that made up applicants’ charts of alleged “dual” support were quite different and did not meet the required “common subject matter”/“same invention” requirement of section 120. Applicants responded to this by arguing that section 120 does not require that the respective 1981 and 1987 disclosure being relied upon for “dual” support have anything in common other than their ability to *independently* provide some kind of section 112 support for the claims. In taking this position, it appears that applicants have confused the issue of “support” required by section 112 (as incorporated into section 120) with the issue of

²⁷ Applicants maintains that:

“[Section] 120 does not require an applicant to demonstrate that the disclosures relied upon under 120 have anything in common besides their ability to separately comply with 112-1 with respect to the claims for which priority is sought. Accordingly, the Examiner’s focus on comparing the support from the two applications for similarity or common subject matter is improper and irrelevant because all applicants are required to do is satisfy 120 is show that each disclosure meets the requirements of 112-1 for a given claim.” (emphasis added)

[Page 141 of applicant’s response filed on 1/28/2002 in application S.N. 08/470,571]

“Accordingly, the law requires a two part test in which the applicant separately demonstrates 112 support for each application. In the FOA, the examiner distorts this straightforward test by imposing a third element of the test whereby the 112 support from each application consists of ‘common subject matter.’”

[See the last 10 lines on page 137 of the response filed on 1/28/2002 in SN 08/470,571].

The examiner disagrees:

“However, as mentioned earlier, a continuing application is entitled to rely on the earlier filing date of an earlier application only with respect to subject matter common to both applications” (emphasis added) [In *Transco Products, Inc., v. Performance Contracting, Inc.*, 32 USPQ2d 1077 [**18]]

“The inquiry required by section 120 demands a comparison of 1) the claims of the parent and CIP applications and 2) any other disclosures made in the applications such as specification and drawing. *Acme Highway*, supra, at 1079, 167 USPQ at 132-33.”

[*Stern v. Superior Distributing Company et al.*, (CA 6), 215 USPQ 1089 at 1094]

"anticipation" that exists under section 102. That is, the fact that applicants can show that all the limitations of a given claim can be "anticipated" (in a section 102 sense) by different teachings from the respective 1981 and 1987 disclosures does not mean that the section 112 requirement of section 120 has been fulfilled. Applicants must also show that these respective anticipatory 1987 and 1981 disclosures being relied upon for proof of section 120 priority do in fact describe/define the "same invention" and therefor constitute "common subject matter" with respect to that which is claimed; i.e. that the respective descriptions are in fact legal equivalents. This would have been a straight forward exercise had the 1981 parent specification been formally incorporated into the 1987 CIP specification by reference (or at least in some immediately discernible fashion) and had the claims been drafted to derive section 112 support directly from this incorporated 1981 subject matter. But this is not the case, and given the present circumstances, attempting to identify "common subject matter" between specifications has proven to be a most unpleasant and daunting task. Fortunately for the examiner, "the law" seems "clear" that the burden of proof is applicants' in that the claims are only entitled to the 1981 effective filing date under section 120 if/when applicants can show that the claims are directed to "common subject matter" found in both the 1981 and 1987 specifications (i.e. the examiner is under no obligation to accept mere allegations or to "prove" that applicants' claims are not entitled to section 120 priority).

g. From the case law, the steps that applicants must perform to show that a given claim is entitled to the 1981 effective filing date seem straightforward enough. Namely, it appears that applicants need only to:

- i. Identify the respective 1981 and 1987 disclosures that are being relied upon for section 112-1 support of the given claim; and
- ii. Show/explain how and why the so identified 1981 and 1987 disclosures describe/define "the same invention" and therefor constitute "common subject matter" with respect to that which is claimed; i.e. why the respective 1981 and 1987 CIP descriptions are legal equivalents and, therefor, result in identical 1981 and 1987 CIP claim constructions.

In the response filed 1/31/2003 in SN 08/487,526, applicants and applicants' expert both submit arguments alleging that each of the pending claims can find some kind of dual section 112 "support" in both of the respective the 1981 and the 1987 disclosures and therefor, so they conclude, the claims are entitled to the 1981 effective filing date. However, it is unclear from these arguments what "standard" of proof applicants and applicants' expert have adopted in support of their conclusions. That is, it is unclear whether applicants and their expert are alleging that the respective 1981 and 1987 disclosures being relied upon for "proof" of priority do in fact describe the "same invention" and therefor constitute "common subject matter" as is required under section 120 or, alternatively, whether applicants and their expert continue to base their arguments on the premise that "the same invention"/"common subject matter" is not a requirement of section 120 and are therefor continue to improperly base their conclusions of adequate "dual" support based on nothing more than alleged "correlated" 1981 and 1987 subject matter (i.e. based on different 1981 and 1987 subject matter that arguably "anticipates" the claims in a section 102 sense). Clarification is needed.

h. The point being that that the long standing impasse concerning the section 120 priority issue is not the result of the examiner's refusal to consider the evidence that applicants have submitted as "proof" of priority. Rather it is the result of the examiner's belief and understanding that the evidence being submitted by applicants misses the mark (given the current fact pattern). As understood by the instant examiner, merely showing that a claim is "anticipated" by respective teachings from the 1987 CIP and 1981 parent disclosures does not constitute proof that a claim is entitled to the 1981 filing date. To the contrary, the examiner believes that the respective 1987 and 1981 *anticipatory* teachings that have been cited by applicants as proof of section 120 priority seem so diverse in nature that they do not meet, or at least have not been shown to meet, the very real "same invention"/"common subject matter" requirement of section 120 (i.e. a real requirement of section 120 that applicants', to this day, continue to refute and dismiss).

The examiner maintains that there is a very real difference between:

- 1) A claim in a later filed CIP application that recites subject matter that is described in both the CIP and parent specifications; and
- 2) A claim in the later filed CIP application that has been drafted in some "quasi-generic" fashion so that it can be anticipated, arguably, by diverse CIP and parent subject matter from the CIP and parent specifications, respectively.

Namely, the examiner understands that the former claim recites "common subject matter" and is therefor entitled to priority under section 120, whereas the latter claim does not and is not.

i) The examiner understands that applicants' claim to the 1981 priority date needs only be addressed and resolved for those claims which are properly rejected under sections 102 and 103 via intervening prior art. Thus, when applicant elects to amend the claims to overcome the intervening prior art, the section 120 priority issue becomes moot. However, in light of applicant's blanket claim to section 120 priority and the fact that these blanket claims were, and still appear to be, founded on an erroneous standard of proof, it is for clarity of record that the examiner provides corresponding "blanket" responses. It is also the reason why the examiner has made every attempt to find and properly apply intervening prior art against all of the claims of the present application (i.e. none of the "prior art" of record has been excluded from consideration against the claims of the instant application as a result of applicants' allegation that ones of their pending claims are entitled to the 1981 effective filing date).

.....

SECTION 112 ISSUES:

E-2) Claims 2-18, 20-30, 33-42, and 67-104 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The following is noted:

A) It is true that, in applicants' 1987 "Wall Street Week" embodiment, an overlay command signal is embedded at a specific time within the transmitted "Wall Street Week" TV program so as to cause a locally generated overlay, at respective receiver stations, to be outputted and overlaid onto the displayed "Wall Street Week" programming at said specific time. It is also true that, to the extent that the occurrence of the embedded overlay command signal is synchronized with "content" of the "Wall Street Week" programming, said overlay command might properly be construed as being *indicative* of TV programming "content". However, as originally disclosed, the receiver station of applicants' "Wall Street Week" embodiment never actually utilized this synchronized relationship between the command signal and the TV programming content to "determine" anything about the "content" of the TV programming. Namely, by detecting the embedded overlay command signal the receiver stations of applicants' "Wall Street Week" embodiment, as originally described, only "determined":

- 1) That the overlay command had been received/detected; and
- 2) That the locally generated overlay was now to be outputted as a result of this receipt/detection.

That is, the receiver stations made no effort in "determining" actual "content" of the audio/video components of the TV programming based on the detection of the overlay command as appears to be claimed (i.e. according to applicant's arguments under section 112-1).

B) Specifically, amended claim 2 now recites a method that includes the step of:

"determining content of a second medium received in said plurality of signals"
[see line 8 of claim 2]

In the response filed 1/29/2003 in 08/487,526, applicants appear to take the position that:

- 1) The section 112-1 support for the "act of determining" comes from the described "act of detecting" the overlay command signal that is embedded within the VBI of the "Wall Street Week" TV program of the 1987 "Wall Street Week" embodiment; and
- 2) That the section 112-1 support for the "content of the second medium" comes from the specific audio/video "content" of the 1987 "Wall Street Week" TV programming to which it is related/synchronized.

As addressed in part "A)" of this paragraph, the examiner disagrees with applicant's position that the cited teachings provide adequate support for that which is now recited. Namely, while the receiver stations of applicants' system were potentially capable of having used the detection of the overlay command signal for "determining content" of the "second medium" in the recited fashion, the instant disclosure as originally filed never described or suggested an embodiment in which this potential capability was ever put to use. That is, nowhere within the originally filed 1987 disclosure was the embedded overlay command signal ever described as having been used for "determining content" of the "Wall Street Week" program as applicant's arguments, under section 112-1, would now suggest and/or require.

C) Given the above, it is still unclear as to where the received step of ***"determining content of a second medium received in said plurality of signals"***, as recited in the context of claim 2, finds section 112-1 support within the instant disclosure as originally filed. Clarification is required.

D) The section 112-1 support for the "content" terminology in the context of claims 8-10 and 14-16 is, for similar reasons, not apparent and/or not understood. Clarification is required. Similar clarification regarding support for the "content" terminology is needed as recited in the context of claims 20, 24, 26, 29, 30, 33, 37, 38, 70, 74, 76, 85, and 95.

E-3) Claim 70-73 (and all claims dependent therefrom) are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1) Claim 70 is directed to an apparatus. However, includes functional language (as in method claims) that is not supported by recitations of corresponding structure. Namely, lines 7-9 of claim 70 include the following recitation:

“wherein, said information based on said second medium is generated based on identifying content of said second medium”.

The structure for providing the recited *generation* and structure for proving the recited *identification of content* has not been positively recited as is required of an apparatus claim. Clarification is required.

SECTION 102 ISSUES:

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

E-4) Claim 2 is rejected under 35 U.S.C. 102(b) as being anticipated by Turner [G.B. #1,486,424].

As is illustrated in figure 5, Turner disclosed a system that comprised:

- 1) Tuning circuitry (not shown) for receiving a plurality of signals;
- 2) Circuitry (@ 41 & 42) for storing information pertaining to a first digital media;
- 3) Circuitry (@ 37) for determining a sync signal "content" of a second video media;
- 4) A decoding **computer**²⁸, made up of elements 16 and 36-47, which coordinates a presentation (i.e. a combine video/text display @ 19) using the stored information and the video component based on the sync signal content that was determined (@ 37); and
- 5) A display device (@ 19) for outputting the so produced combined medium presentation to the respective user.

²⁸ The term *computer*, by definition, refers to nothing more than "a device that computes".

E-5) Claims 3-6 and 11-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Turner [G.B. #1,486,424]. The following is noted:

1) With respect to claim 6: All TV transmitter stations are intermediate stations in the sense that they receive TV programming from remote station/studio locations and broadcast it to the receiver station locations.

2) With respect to claims 13 -16: Sync signals are inherently "identifiers" of a specific timing content of the TV signal which includes audio and video signal components.

E-6) Claims 2 is rejected under 35 U.S.C. 102(b) as being anticipated by Yoshino et al. [GB 1,405,141].

Yoshino et al. not only disclosed a television receiver station which operated to simultaneously display on a single CRT (18) locally generated image data provided from an "electronic table computer" and the video signal component of a received television signal,

"The present invention also provides a television receiver on the picture tube of which a television program and the result of the computing process are shown simultaneously"
[lines 11-113 on page 4]

but Yoshino et al. explicitly evidences the fact that those of ordinary skill in the art had understood it to be "advantageous", e.g. as of its 1975 publication date, to have enabled locally generated image data from a computer to be superimposed upon displayed TV programming at TV receiving stations.

"As described above there is obtained various advantages such as.....the display of computed information on the picture tube of a television receiver in superposition with the television program"
[lines 68-80 on page 4]

As is shown in figure 1, the receiver disclosed by Yoshino et al. comprised:

a) Circuitry for receiving a plurality of signals including:

1) A TV signal received (@ 56) from an external TV signal source;
and

2) Signals (e.g. @ 19-24) that are received from a local "computer"
(e.g. @ 78);

b) Circuitry (@5) which, as is shown in figure 2, includes a "memory circuit" for storing information from the local "computer";

c) Circuitry (@ 14) for determining a timing "content" of the received TV signal by detecting sync signals contained therein;

d) A display control **computer**²⁹ (e.g. @ 8) for coordinating (e.g. synchronizing) the display of the locally generated computer image data with the display of the received TV signal based on the determined timing "content" of the TV signal; and

²⁹ The term *computer*, by definition, refers to nothing more than "a device that computes".

e) A display device (e.g. @ 18) for outputting a multimedia presentation comprised of the computer generated image data superimposed over the video component of the received TV signal.

E-7) Claim 2 is rejected under 35 U.S.C. 102(b) as being anticipated by Zaboklicki [D.E. #2,904,981].

1) Throughout much of the prosecution history, applicants have tried to have the Zaboklicki prior art removed from consideration by arguing, among other things, that the description provided therein was not enabling. The examiner disagrees noting that the Zaboklicki disclosure must not be construed in a vacuum. The teachings of Zaboklicki must be considered in light of the knowledge (i.e. the state of the art) that existed at the time of applicant's alleged invention. In this regard, paragraph "D-3" of this Office action has been provided.

2) As evidenced via the two translations of record, Zaboklicki disclosed a system for transmitting and displaying interactive TV programming. Each interactive TV program was transmitted to a plurality of receiver stations using one or more TV signal transmissions. That is, some of the interactive TV programs that were transmitted in Zaboklicki utilized only a single TV signal transmission that was conveyed to the receivers over a single tunable TV channel, while others of the interactive TV programs were multi-channelled programs comprised of multiple TV signal transmissions conveyed to the receivers over multiple tunable TV channels.³⁰

Each of the TV signal transmissions in Zaboklicki comprised a conventional tunable TV signal that included ones of the following:

- 1) A conventional *primary* video and audio components;
- 2) Additional *secondary* audio components that, as described in the translations, were to be conveyed in a conventional manner;³¹
- 3) Conventional teletext data transmissions, conveyed within the VBI of the TV signal transmissions, which conveyed:

A) "Pages" of display code which were used at the receivers to "locally generate" displayable teletext images; and

³⁰ The 1961 publication to Morchand [US #3,008,000] illustrates the fact that such multi-channel interactive TV programming was notoriously well known in the art.

³¹ The "conventional manner" being that used normally to carry secondary multi-lingual audio signals [See, for example, the 1965 U.S. patent #3,221,098 to Feldman et al].

B) Computer software, i.e. "Telesoftware", that was used to program the CPUs of the receivers with the appropriate control programs;³² and

4) Program fragment/segment identification information.

At each receiver location, a CPU located therein operated under control of the downloaded Telesoftware to receive various inputs (e.g. initial user data, the program fragment/segment identifiers, user responses, etc,...) and in response thereto create an interactive multimedia presentation by:

1) Selectively tuning the TV receiver to sequentially receive and display one or ones of the multi-channel TV signal transmissions; and to

2) Selectively combine with the display thereof:

A) One or ones of the secondary audio components;

B) One or ones of the locally generated teletext images; and

C) One or ones of locally stored and or locally generated video/audio signal components; and

D) Outputted print data.

As to the claim limitations:

I. A first reading/interpretation of the Zaboklicki prior art:

As is shown in figure 3, Zaboklicki disclosed a receiver station for interactively outputting a multimedia presentation. The station comprised:

1) A TV receiver (54) for receiving a plurality of TV signal transmissions that include:

a) Primary video and audio TV signal components;

³² Wherein Teletext transmissions that included "Telesoftware" were notoriously well known to those of ordinary skill in the art [See, for example, the 1980 publication "Broadcast Telesoftware: Experience with ORACLE" by Hedger, and the 1980 publication "Telesoftware- Value Added Teletext" by Hedger et al].

b) Secondary/additional audio signal components;

c) Teletext signal components including:

1. Pages of display data; and

2. Telesoftware;

2) A memory (7) for storing information of a first media [for storing "Telesoftware"];

3) A teletext decoder (@ 56) for determining "content" of other media [i.e. for detecting the page number content of the teletext media; for detecting the control signal content of the teletext media, for detecting program segment/fragment identifier content of the primary and secondary video/audio components, etc, ...]

4) A computer (e.g. including "CPU" 6) which, under control of the stored "telesoftware" coordinates a presentation of the teletext page data and secondary audio components with the presentation of primary video/audio TV signal components; and

5) A display device (@ 54) for outputting the coordinated presentation.

II. A second alternative interpretation of the Zaboklicki prior art:

As is shown in figure 3, Zaboklicki disclosed a receiver station for interactively outputting a multimedia presentation. The station comprised:

1) A TV receiver (54) for receiving a plurality of TV signal transmissions that include:

a) Primary video and audio TV signal components;

b) Secondary/additional audio signal components;

c) Teletext signal components including:

1. Pages of display data; and

2. Telesoftware;

2) A memory (44) for storing information of a first media [for storing selected pages of teletext data];

3) A teletext decoder (@ 56) for determining "content" of other media [i.e. for detecting a "telesoftware" content of the program segments/fragments; for detecting program segment/fragment identifier content of the primary and secondary video/audio components, etc, ...]

4) A computer (e.g. including elements 6, 7, and 49) for coordinating, under control of "telesoftware", the presentation of the stored teletext page data and secondary audio components with the presentation of primary video/audio TV signal components; and

5) A display device (@ 54) for outputting the coordinated presentation.

E-8) Claim 3-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Zaboklicki [D.E. #2,904,981] for the reasons that were set forth for claim 2 above. Additionally, the following is noted:

1) With respect to claims 3 and 4:

a) With respect to the first reading/interpretation, note that the telesoftware is stored in the RAM (7) of the CPU (6);

b) With respect to the second interpretation, it is noted that the terms *computer* refers to "a device that computes". Therefor, element (56) also falls within a fair reading of "computer".

2) With respect to claims 6:

a) All TV stations are "intermediate station" because they are located between/intermediate local and remote program feeds/suppliers and the receiver station locations. Local TV stations (and CATV headends) also constitute "intermediate transmitted stations" being that they receive and rebroadcast TV signals that are transmitted to them from other network station locations.

3) With respect to claims 8-10 and 13-16:

a) The examiner notes that, based on the detection of program segment/fragment identifier "content" at (56), CPU (6) generates channel switching signals (@ 27) which are provided to receiver

(54) to control a tuner therein to select new TV signal transmissions comprises primary and secondary video and audio signal content. At least the secondary audio signal content includes "explanations".

4) With respect to claims 11 and 12:

a) "TELEXT" data is provided, inherently, via digital data channel.

5) With respect to claims 17 and 18:

a) The receiver includes circuitry for storing at least three types of received media (e.g. @ 7, 44, and/or 50).

E-9) Claims 20 is rejected under 35 U.S.C. 102(b) as being anticipated by Zaboklicki [D.E. #2,904,981] for the reasons that were set forth for claims 3-18 above. Additionally, the following is noted:

To create its "coordinated" multi-media presentation, each receiver necessarily received the described segment/fragment "identification information" pertaining to a "content" of all multi-channel transmissions, and the additional components therein, that were selected and displayed as part of its multimedia presentation [e.g. each receiver must have at least known that the "content" contain therein belonged to the specific interactive TV program that was being displayed].

That is, inherently, a "content" of each multi-channel transmission must have been determined/"identified" by each receiver station before it was tuned and received [e.g. the receiver must know that the "content" contained therein belongs to the interactive TV program currently being displayed/presented];

E-10) Claims 21-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Zaboklicki [D.E. #2,904,981] for the reasons that were set forth for claim 20 above.

E-11) Claims 26, 27, 37-42, 67-69, and 82-84 are rejected under 35 U.S.C. 102(b) as being anticipated by Zaboklicki [D.E. #2,904,981] for the reasons that were set forth for claim 20 above.

E-12) Claim 33 is rejected under 35 U.S.C. 102(b) as being anticipated by Morchand [U.S. Patent #3,008,000].

As is shown in figure 1, Morchand disclosed a system for presenting a multimedia TV presentation; i.e. a TV presentation comprising a video "media" component and an audio "media" component. The system comprised:

- a) Tuner circuitry (@ 18a and 18b) for receiving a first multimedia TV signal from a first one of the illustrated transmitter stations;
 - b) Circuitry for outputting the first multimedia TV signal to a plurality of output device (@ 22 and 42);
 - c) An input device (@ 28) for receiving user inputs based on the outputted/displayed first signal;
 - d) Control logic (@ 26, 28, and 30) for "comparing" said user response to information, e.g. to the pattern of light impulses detected @ 40a-40n, that corresponds to "content" of the first signal [i.e. the pattern of light corresponds to a limited number of answers that can be selected by the user in response to a question asked of the user via the first signal, wherein the logic circuit effects a comparison between the user response and the displayed pattern to determine which answer has been selected (note lines 26-49 of column 3)];
 - e) Said tuner circuitry (@ 18a and 18b) for tuning the receiver station to receive a second multimedia TV signal from a second one of the illustrated TV signal transmitters;
 - c) Circuitry for outputting the audio and video information that corresponds to the second signal;
- wherein the resulting multimedia TV signal presentation comprises audio and video information from both received TV signals.

SECTION 103 ISSUES:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

E-13) Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barnaby [US #3,982,064] in view of Okada et al. [JP 56-8975].

I. The showing of Barnaby:

Barnaby discloses a TV transmission system. The system includes the transmitter station circuitry that is shown in figure 2, and the receiver station circuitry that is shown in figure 1. The following is noted:

1) As is evidenced in figure 2, the transmitter station circuitry of Barnaby comprised:

- a) A "source" of TV programming (not shown in the figure) which provides the video component of the TV program signal ("VIDEO"); and
- b) A "source" of teletext data (e.g. 100, 102, 104, 106, 110, 112, and 114), that is different from the source of TV programming, for providing teletext data ("DATA").

The teletext data from the second named source was embedded in the VBI of the video from the first named source to create a combined signal ("OUTPUT DATA AND VIDEO") for transmission to the receiver stations.

2) As evidenced in figure 1, the receiver station circuitry of Barnaby comprised:

- a) A storage device (14) for storing "first information" representing a received teletext page address;
- b) An input device (22) for inputting "second information" representing a desired teletext page address;
- c) Comparing circuitry (21) for comparing said "first information" stored at the receiving station (@14) with said "second information" to determine whether to generate and present a "second medium" comprised of a locally generated teletext text/graphic image (@ the output of 35), wherein said generation and presentation of the second medium occurs based on the selective receipt of the "third information" comprising the teletext page instruction set that is associated with said "first information" and is stored @ 26;

d) Switching circuitry (2) for coordinating the display of the video component of the received TV programming with the display of the locally generated teletext based on said "determination"; and

e) An output device (4) for displaying the coordinated first and second mediums.

II. Differences:

Claim 24 differs from the showing of Barnaby only in that:

a) Barnaby does not state that the page number input (@ 22) "corresponds to content" of the received TV programming; and

b) Barnaby only illustrates a single output/display device (@ 4) and does not show/suggest separate display/output devices for the first and second mediums.

III. Obviousness:

The following is noted:

a) The examiner takes Official Notice that it was notoriously well known to those of ordinary skill in the art at the time of applicant's alleged invention for the user entered page numbers to have pertained to "program-related" teletext pages and, therefor, for the entered page numbers to have "corresponded to content" of the received TV programming.³³ The examiner maintains that it would have been obvious to one of ordinary skill in the art for the receiver described in Barnaby to have been utilized for the notoriously well-known and conventional purpose of displaying "program related" teletext pages.

b) As is evidenced by figures 2 and 3 of Okada et al., it was known and desirable to those of ordinary skill in the art at the time of applicant's alleged invention to have added appropriate selection and switching circuitry (e.g. 30, 31, 32, 40) to conventional teletext receiving stations to enable users to selectively output received teletext images to a separate output printing devices (@ 33) in order to obtain hardcopies thereof. Given this showing, it would have been obvious to one of ordinary skill in the art to have modified the conventional teletext receiver described by Barnaby to provide this conventional desirable feature.

³³ e.g. Note: lines 12-20 of the second column on page 30 of the 1976 article "Oracle on Independent Television" by Green et al.; lines 2-7 on page 26 of WO 81/02961 to Campbell et al.; etc,...

E-14) Claims 74 and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barnaby [US #3,982,064] in view of Okada et al. [JP 56-8975], for the same reasons that were set forth for claims 24 and 25 above, in view of Betts [GB 1,556,366].

- 1) Claims 74 and 75 differ from the system disclosed by Barnaby, modified by Okada et al., only in that the Teletext decoding circuitry of the modified system was implemented using dedicated logic circuitry rather than in software using a microcomputer.
- 2) Betts evidences the fact that such software implementations of conventional teletext decoder circuitry was known to have had significant advantages over the dedicated logic approach [e.g. lines 50-55 and 70-74 on page 1].
- 3) The examiner maintains that it would have been obvious to one of ordinary skill in the art to have utilized a software driven decoder to provide the processing of the dedicated circuitry in the modified system of Barnaby given the known advantages provided thereby (as evidenced by Betts).

E-15) Claims 103 and 104 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barnaby [US #3,982,064] in view of Okada et al. [JP 56-8975] for the same reason that is set forth for claims 74 and 75 above. Further, the following is noted

Multi-channel cable TV systems began (and continue) to be used to convey conventional TV broadcast signals to household receiving locations that are unable to receive the broadcasted TV signals directly (due to distance and/or environment). Thus, utilizing a multi-channel cable system to convey conventional broadcast TV signals of the type described by Barnaby and Okada et al. would have been obvious given that such simply represents a utilization for which cable was intended.³⁴

³⁴ Note, for example, WO/02961 to Campbell et al.

E-16) Claims 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komori [JP 52-22423] and Long et al. [US #4,081,990].

I. The showing of Komori:

As is shown on the cover page, Komori disclosed a video signal processing device which:

- a) Received a first information signal (V1) representing a first analog video signal medium;
- b) Received a second information signal (V2) representing a second binary video signal medium;
- c) Identified (@ 11) a sync signal "content" of the analog video signal media;
- d) Identified (@ 13) a sync signal "content" of the binary video signal media;
- e) Stored information (@ 17) based on the second binary video signal media; and
- f) Outputting (@20) a signal (V3) representing a multimedia presentation comprised of selected portions of analog video information and selected portions of the binary video signal information. [see figure 4]

The claims differ from the showing of Komori only in that Komori does not explicitly illustrate at least one of the signals V1 and V2 as having been provided from a remote transmitter source.

II. The showing of Long et al.:

As is shown in figures 1 and 15, Long et al. disclosed a video signal processing device which:

- a) Received a first information signal ("LOCAL" of figure 15) representing a first video signal medium;
- b) Received a second information signal ("REMOTE" of figure 15) representing a second video signal medium, wherein this second information signal is provided from a remote signal transmission source (not shown);

- c) Identified (@ "16" of figure 1) a sync signal "content" of the first video signal media;
- d) Identified (@ "14" of figure 1) a sync signal "content" of the second video signal media;
- e) Stored information (@ "15" of figure 1) based on the second video signal media; and
- f) Outputting (@ "14" of figure 15) a signal ("VIDEO OUTPUT") representing a combined presentation comprised of selected portions of the first video signal information and selected portions of the second video signal medium.

The claims differ from the showing of Long et al. only in that Long et al. does not explicitly describe an application of the illustrated system in which the first and second video signals represent different "media".

III. Obviousness:

- A) Given the showing of Long et al., one of ordinary skill in the art would have recognized the obviousness of having provided at least one of the video signals V1/V2 in Komori from a remote transmission station location.
- B) Alternatively, given the showing of Komori, one of ordinary skill in the art would have recognized the obviousness of having utilized the system of Long et al. to have combined two video signals of different "media".

E-17) Claim 82 is rejected under 35 U.S.C. 103(a) as being unpatentable over Komori [JP 52-22423] and Long et al. [US #4,081,990] for the same reason as explained for claims 26 and 27 above.

One of ordinary skill in the art would have understood the fact that the respective video signals included an audio component processed therewith in a like manner.

E-18) Claims 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kashigi et al. [US patent # 4,218,710] in view of Komori [JP 52-22423] and Long et al. [US #4,081,990].

I. The showing of Kashigi:

As is shown in figure 1, Kashigi et al. disclosed a processing system for combining multiple received non-synchronous video signals (e.g. @ 11 and 12) into a single combined video signal output (@14). The system:

- a) Received a first information signal (@ 11) representing a first video signal medium;
- b) Received a second information signal (@ 12) representing a second video signal medium;
- c) Identified (@ "21", "24", and "25" of the "1st FRAME synchronizer" @ "16") a sync signal "content" of the first video signal media;
- d) Identified (i.e. @ "21", "24", and "25" of the "2nd FRAME synchronizer" @ "17") a sync signal "content" of the second video signal media;
- e) Stored information (@ "30" of the "1st FRAME synchronizer" @ "16") based on the first video signal media;
- f) Stored information (i.e. @ "30" of the "2nd FRAME synchronizer" @ "17") based on the second video signal media; and
- g) Outputting (@ "14") a signal ("VIDEO OUTPUT") representing a combined presentation comprised of selected portions of the first video signal information and selected portions of the second video signal medium.

II. Differences:

The claims differ from the showing of Kashigi et al. only in that Kashigi et al. did not explicitly describe or show:

- 1) That at least one of the video signal inputs (@ 11/12) was provided from a remote transmission signal source; and
- 2) That the video signal inputs (@ 11/12) represented different video signal "media".

III. Obviousness:

The applied prior art of Long et al. and Komori have been described above. The following is noted:

1) Given the showing of Long et al., one of ordinary skill in the art would have recognized the obviousness of having provided at least one of the video signals (@ 11/12) in Kashigi et al. from a remote transmission station location; and

2) Given the showing of Komori, one of ordinary skill in the art would have also recognized the obviousness of having utilized the modified system of Kashigi et al. to have combined two video signals of different "media".

E-19) Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over any one of:

A) Marsden [GB 871,238];

B) Germany [GB 959,274]; and

C) Diederich [DT 2,356,969],

in view of the 1980 publication “Controlling Cable Head Ends and Generating Messages by Means of a Micro Computer” by Schloss et al.

I. The automated insertion of advertising at local TV stations:

The examiner maintains that it was notoriously well known in the art for central/network TV stations to have embedded one or more “instruction signals” into their broadcasted network TV programming transmission in order to have automated the process of inserting local/regional advertising into the network TV programming at local/regional TV station location prior to re-transmission therefrom. That is, the embedded “instruction signal” identified those portions/“content” of the network TV programming that was to be replaced, at the local/regional stations, by local/regional advertising. Such conventional “automated” system technology is illustrated by any one of Marsden, Germany, and Diedrich.

In the automated system discussed above, the local/regional TV stations correspond to the recited “receiving station” in that the local/regional TV stations of the automated system necessarily comprised:

- 1) Circuitry for receiving and decoding the “instruction signal” that are embedded within the received network TV programming to “**identify content**” of the network TV programming; i.e. to identify portions/segments of the network TV programming that are to be replaced with local/regional advertising;
- 2) Circuitry that, in response to said identified content, “**causes at least one video image of a series of discrete video images to be outputted from a local/regional advertising TV program source subsequent to the content identification process**”; and
- 3) **Combining/switching circuitry for sequentially combining the at least one video image that is outputted from the local/regional**

program source with and received network TV programming to create a combined TV signal presentation which is inherently

“multimedia” by its very nature; i.e. such TV signals inherently comprised audio and video media components.

II. Differences:

Claim 29 differs from the automated system discussed above only on that the automated system discussed above did not necessarily generate the series of discrete images that comprised the local/regional TV advertising by “processing a command signal that causes the execution of processor instructions to create” said series of images.

III. The showing of Schloss et al.:

A) The publication by Schloss et al. has been cited as evidencing the fact that:

- 1) It was conventional for TV stations to have been controlled by a computer whereby the computer was programmed with program event file (i.e. a “control signal”) that, when processed by the computer, caused the execution of software (i.e. “processor instructions”) to create, at the video output of the computer, a series computer generated message and advertising video frames; and
- 2) That the computer included its own receiver (i.e. a the “modems”) for receiving information from remote sources (i.e. from advertisers).

That is, Schloss et al. explicitly taught the following:

“The purpose of this project was to program an Apple Micro-Computer to perform the following functions in Omega’s cable system in Brazil, Indiana.

1. Channel Switching;
2. Character Generation;
3. Perpetual clock and calendar.

The clock calendar function and the keyboard command function interact with the computer to produce output voltages. These voltages switch coaxial switches to perform the above functions. Audio switching is similarly performed with the computer output voltages. The video output of the computer is used as a character generation and is routed to the switcher as an input. Upon command the computer will play messages and/or advertisements which the switcher will route to an output channel. At a cost of less than \$3500 complete, the Apple II computer and switcher is an economical controller and character generator”

[lines 2-22 in the first column on page 136 of the publication]

“A modern cable television system has a need to control multiple inputs (normally television signals) into a limited number of cable television channels.

The system needs to control these signals by time of day, day of week, and day of the month” [lines 25-30 in the first column on page 136 of the publication]

"Utilizing an Apple II micro computer and custom switcher, the computer will control three audio and video inputs into one output channel and any three audio and video inputs into a second output channel. One of these video inputs can be the video output of the computer which we have utilized as a message and advertising input to our two channels" [lines 37-44 in the first column on page 136 of the publication]

"The operating program, messages, and event file of times of channel changes are stored on the disk and loaded into the computer when needed" [lines 3-6 in the second column on page 136 of the publication]

"Any video and audio sources could be [substituted] for those listed above and extra relays could be wired in parallel with the coaxial relays. For example, the computer could energize a remote controlled audio cart player or video player whenever it's video output was selected by the computer" [lines 3-9 in the first column on page 137 of the publication]

"The computer program was written by John Turpin of Home Computer Center in Indianapolis, consists basically of three parts:

1. A message entry program to input messages and store them on disk.
2. An event entry program to input times and dates of events and store these in chronological order on the disk.
3. An event handling program to compare the time from the real time clock with the times in the event file and carry out the specified events as necessary."

[lines 13-24 in the first column on page 137 of the publication]

"The most important strength of the controller is that the system is 'software' controlled rather than 'hardware' controlled. Any system changes and additions require only additional programming."

[lines 22-26 in the second column on page 137 of the publication]

"Through the use of telephone interconnection devices (modems), the computer at the head end can be remotely programmed. The cable TV office could change the event file without going to the head end. Similarly, any advertiser could access the computer and change his advertisement on a daily or hourly basis" [lines 4-11 on page 138 of the publication]

IV. Obviousness:

The examiner maintains that it would have been obvious to one of ordinary skill in the art to have modified the local/regional TV stations in any one of Marsden, Germany, and Diederich, to have included the "computer" implemented station "controller" that was described in Schloss et al. given the many strengths and advantages provided thereby.

"The most important strength of the controller is that the system is 'software' controlled rather than 'hardware' controlled. Any system changes and additions require only additional programming."

[lines 22-26 in the second column on page 137 of the publication]

"Upon command the computer will play messages and/or advertisements which the switcher will route to an output channel. At a cost of less than \$3500 complete, the Apple II computer and switcher is an economical controller and character generator"
[lines 16-22 in the first column on page 136 of the publication]

"Through the use of telephone interconnection devices (modems), the computer at the head end can be remotely programmed. The cable TV office could change the event file without going to the head end. Similarly, any advertiser could access the computer and change his advertisement on a daily or hourly basis" [lines 4-11 on page 138 of the publication]

Wherein, as described in Schloss et al., the modified system would have utilized the control "computer" to generate all, or at least some, of the local/regional advertisements that replace the identified portion of the network programming.

E-20) Here, for completeness of record, it is noted that while conventional TV stations typically operated to "sequentially" mixed/combine the advertising sequences with the TV program sequences, it was a notoriously well known alternative to have simultaneously mixed/combined the advertising sequences with the TV program sequences. This alternative approach was known to have been advantageous in that it allowed the advertising to be displayed without causing a disruption to the TV programming. See, for example:

A) U.S. patent #2,723,307 to Baracket et al. which was patented in 1955 [note lines 23-31 of column 1]; and

B) Japanese patent document #51-126712 to Kubota et al. which was published in 1976.

E-21) Claims 2-6, 11-16, 20-23, 76-81, and 85-94 are rejected under 35 U.S.C. 103(a) as being unpatentable over any one of:

A) Marsden [GB 871,238];

B) Germany [GB 959,274]; and

C) Diederich [DT 2,356,969],

in view of the 1980 publication “Controlling Cable Head Ends and Generating Messages by Means of a Micro Computer” by Schloss et al., for the same reasons that were set forth for claims 29 and 30 above.

E-22) Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over any one of:

A) Marsden [GB 871,238];

B) Germany [GB 959,274]; and

C) Diederich [DT 2,356,969],

in view of the 1980 publication “Controlling Cable Head Ends and Generating Messages by Means of a Micro Computer” by Schloss et al., for the same reasons that were set forth for claim 2 above, further in view of the 1978 re-print of the article “Automated Videotape Delay Of Satellite Transmissions” by Chiddix.

The Chiddix article has been cited as evidencing the fact that it was known to have recorded the TV programming being broadcast to local/regional stations for delayed re-broadcast therefrom. In the case of automated commercial insertion systems, it was noted in Chiddix that one had to be sure to record the insertion control signal too [note the second full paragraph in the last column of the article].

Given the showing of Chiddix, the examiner maintains that it would have been obvious to have further modified the local/regional receiver stations of Marsden, Germany, and Diedrich to have included the recording means described by

Chiddix to delay the received network programming where appropriate (i.e. when the network station and the local regional stations are located in different time zones).

E-23) Claims 34 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morchand [US patent #3,008,000] in view of Zaboklicki [DE 2,904,981].

- 1) Morchand discloses a multi-channel interactive TV display system as was set forth above in the rejection of claim 33.
- 2) Claims 34 and 36 differ from the showing of Morchand only in that Morchand did not disclose circuitry for recoding the user's responses and for conveying the so recorded responses to a remote location via the telephone line;
- 3) Zaboklicki also disclosed a multi-channel interactive TV display system as was set forth above in the rejection of claim 2. Zaboklicki evidences the fact that it was known to have been desirable within such interactive systems to have recorded the users responses and conveyed them to a remote location via the telephone line [note figure 4 of Zaboklicki].
- 4) The examiner maintains that it would have been obvious to one of ordinary skill in the art to have modified the system disclosed by Morchand in accordance with the teachings of Zaboklicki thereby enabling the user's responses recorded and conveyed to a remote location via the telephone line.

E-24) Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morchand [US patent #3,008,000] in view of Zaboklicki [DE 2,904,981].

- 1) Morchand discloses a multi-channel interactive TV display system as was set forth above in the rejection of claim 33.
- 2) Claim 35 differs from the showing of Morchand only in that Morchand did not disclose circuitry for printing out information corresponding to the second information;
- 3) Zaboklicki also disclosed a multi-channel interactive TV display system as was set forth above in the rejection of claim 2. Zaboklicki evidences the fact that it

was known to have been desirable to provided the receiver in such systems a printing capability [e.g. note element 37 of figure 3].

4) The examiner maintains that it would have been obvious to one of ordinary skill in the art to have modified the system disclosed by Morchand in accordance with the teachings of Zaboklicki thereby enabling the second information to be conveyed to a printer for hardcopy reproduction.

E-25) Claims 76-81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thonnart [US patent #4,413,281] and Zaboklicki [DE 2,904,981].

I. The showing of Thonnart and Zaboklicki:

As was described above within paragraph D-3 of this Office action, Thonnart and Zaboklicki both disclosed interactive TV systems which:

- 1) Transmitted interactive TV programming to a plurality of receiving stations wherein the TV programming comprised pluralities of analog and digital program segments/fragmenst;
- 2) Downloaded "logic" sequences (i.e. "software") to the receiver stations so as to instruct the receiver stations as to how to select and assemble/display ones of the transmitted program segments/fragments into a user specific multimedia interactive presentation based on the specific inputs/responses of the user; and
- 3) Added program segment/fragment identifiers to the transmitted program segments/fragments in order to have allowed the receiver station to find and identify those of the transmitted segments/fragments that it needs for its given user specific presentation.

II. Differences:

The claims differ from the showing of Thonnart and Zaboklicki in the following ways:

- 1) While the receiver stations in Thonnart comprised first and second receivers (i.e. tuners) for receiving the analog and digital program segments/fragments respectively, Thonnart did not explicitly indicate the receiver stations as having comprised a "microcomputer" for executing the downloaded logic sequences; and
- 2) While the receiver stations in Zaboklicki comprised a "microcomputer" for executing the downloaded logic sequences (i.e. Telesoftware),

Zaboklicki did not explicitly show or indicate an embodiment of invention in which the analog and digital program segments/fragments were conveyed over separate TV channels; i.e. wherein the receiver stations comprised first and second receivers (i.e. tuners).

III. Obviousness:

1) Even if the receiver stations in Thonnart were to have comprised dedicated circuitry for executing the downloaded logic sequences, the examiner maintains that modifying the receivers with a "microcomputer" represents an obvious upgrade of technology known to those of ordinary skill in the art at the time of applicant's alleged invention (as evidenced by the showing of Zaboklicki); and, alternatively

2) That transmitting the analog and digital program segments/fragments in Zaboklicki via separate/different channels, thereby requiring the receivers to have had separate receivers/tuners, represents a known and obvious design alternative (as evidenced by the showing of Thonnart).

E-26) Claims 85-90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thonnart [US patent #4,413,281] and Zaboklicki [DE 2,904,981] for the same reasons that were set forth for claims 76-81 above.

E-27) Claim 95 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zaboklicki [DE 2,904,981] in view of Field et al. [U.S. #4,398,216] and Laviana [U.S. #3,245,157].

I. The showing of Laviana and Zaboklicki:

As was described above within paragraph D-3 of this Office action, Laviana and Zaboklicki both disclosed interactive TV systems in which ones of a plurality of transmitted audio signal fragments/segments were selected at each receiver station, based on respective user's inputs, to interactively create a user specific multimedia presentation thereat. In both systems, the multimedia presentation included: at least one video component that was outputted to a video output device; and selected audio signal segments/fragments which were outputted to an audio output device.

II. Differences:

Zaboklicki explicitly indicates that the plurality of audio segments/fragments were to be transmitted to the receiver station locations in a manner analogous to conventional foreign language audio transmissions and, being such, that the audio segments/fragments were to be transmitted to the receiving station using via conventional "**audio channels or radio channels**".³⁵ With respect to the figure 3 receiver station embodiment, Zaboklicki indicates that the audio fragments/segments were selected (i.e. turned on and off) under computer control via some type of audio channel selection circuitry (@ 43) located within the TV receiver (@ 54). Zaboklicki, however, does not explicitly describe this computer controlled audio channel selection element as having comprised a computer controlled "tuner".

III. Obviousness:

While Zaboklicki does not explicitly described the audio selection circuitry (43) of his figure 3 receiver station embodiment as having comprised a computer controlled RF "tuner", such a controlled RF "tuner" implementation of the selection circuitry (43) seems to be suggested within the Zaboklicki prior art itself by its noted reference to conventional "**radio channels**"³⁶; i.e. obviously, RF "tuning" circuitry was required to receive RF audio signal segments/fragments conveyed by such explicitly described "radio channels". In case of doubt, however, one needs only turn to Laviana which evidences the fact that it was well known within the interactive TV arts to have utilized separate "radio channels", e.g. separate RF carriers, to have conveyed the respective RF audio program segments/fragments of a complete interactive TV program to the receiving station locations; i.e. wherein the receiving station circuitry necessarily comprised controlled RF tuning circuitry for selectively receiving and outputting the audio signals from ones of the "radio channels"/RF carriers based on the user's inputs/responses [note: lines 69-72 in column 3; and lines 31-40 of column 4]. That is, given such teachings of Laviana, having implemented the audio segment/fragment selection circuitry (43) within Zaboklicki using an RF tuner represents nothing but an obvious choice of design. That is, the receiver station of Zaboklicki was described as receiving its audio program segments/fragments over RF radio channels via a computer controlled selection device and, as evidenced by the showing of Laviana, a RF "tuner" was a well known device by which such RF segments/fragments were known to have been selected.

.....

³⁵ Such conventional transmission schemes having been known to those of ordinary skill in the art as evidenced by U.S. Patent #4,398,216 to Field et al. [e.g. note: the prior art that is described in lines 1-17 of column 2; and the invention of figures 1, 2, and 8].

³⁶ Again, such a conventional transmission scheme having been known to those of ordinary skill in the art as evidenced by U.S. Patent #4,398,216 to Field et al. [e.g. note the prior art that is described in lines 1-17 of column 2].

With respect to the limitations of the claim:

- a) The "first receiver" of claim 95 reads on that portion of TV receiver (54), e.g. the circuitry controlled by signal (27), of the modified system of Zaboklicki that receives the multi-channel TV signals;
- b) The "second receiver" of claim 95 reads on that portion of TV receiver (54), e.g. the RF tuning circuitry (@ 45), **of the modified system of Zaboklicki** that receives the RF audio segments/fragments of the additional audio "radio channels";
- c) The "microcomputer" of claim 95 reads on elements (6, 7, 34, 39, and 49) of the modified system of Zaboklicki which inherently compares the user entered responses to information of the interactive programming "script", i.e. provided via the downloaded "Telesoftware", to determine which of the RF audio program segments/fragments were to be tuned to next; and
- d) Wherein the receiver presents a multimedia presentation that includes a the multi-channel TV signal component provided at a first output device (e.g. the CRT of the TV receiver) and an additional audio segment/fragment component provided at a second output device (i.e. the speaker of the receiver (54)).

E-28) Claims 96, 97, 99, and 100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zaboklicki [DE 2,904,981] in view of Field et al. [U.S. #4,398,216] and Laviana [U.S. #3,245,157], for the same reason that were set forth for claim 95 above. Additionally, the following is noted:

- a) With respect to the claims 96 and 97, note figure 4 of Zaboklicki.

E-29) Claims 33, 34, 36, 101 and 102 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zaboklicki [DE 2,904,981] in view of Field et al. [U.S. #4,398,216] and Laviana [U.S. #3,245,157], for the same reason that were set forth for claims 96, 97, 99 and 100 above.

E-30) Claim 98 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zaboklicki [DE 2,904,981] in view of Field et al. [U.S. #4,398,216] and Laviana [U.S. #3,245,157], for the same reason that were set forth for claim 95 above, further in view of the publication “A Television Facsimile System” by Soejima. The following is noted:

1) The receiver station of modified system of Zaboklicki also comprised a “printer” (@ 37) for outputting hard-copy information related to the interactive programming. Zaboklicki, however, does not indicate that this outputted information is obtained from the controlled RF tuner (@45).

2) As shown in figure 7, Soejima has been cited to evidence the fact that it was known to have embedded print data within the audio component of TV programming;

3) Given the showing of Soejima, the examiner maintains that it would have been obvious to one of ordinary skill in the art to have utilized the “printer” (@37) of the modified system of Zaboklicki to have printed print data obtained from the RF audio channels; i.e. locating such print data within these RF channels having being an obvious location for data that pertains to specific explanations provided by the audio segments/fragments carried therein.

E-31) Claims 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zaboklicki [DE 2,904,981] in view of Field et al. [U.S. #4,398,216] and Laviana [U.S. #3,245,157], for the same reason that were set forth for claim 95 above, further in view of the publication “A Television Facsimile System” by Soejima, for the same reason that was set forth for claim 33 above [see the explanation provided in regard to the limitations of claim 98].

E-32) Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuboka et al. [JP 55-45248] in view of the 1979 article “TOUCH-TONE’ TELETEXT: A COMBINED TELETEXT-VIEWDATA SYSTEM” to Robinson et al.

I. Conventional TELETEXT/VIEWDATA receiver/decoder structure:

As is shown in figure 2, Tsuboka et al. disclose a conventional computer controlled videotex decoder that comprises:

- 1) Inputs (@ 2 and 12) for receiving a plurality of signals from external signal sources including:
 - a) TV programming from an external TV programming source;
 - b) Teletext data signal from an external teletext data source; and
 - c) Viewdata from an external viewdata source.
- 2) The memory of a “computer” (e.g. @ 9 and/or 72) for storing first information representing a first Teletext/Viewdata media;
- 3) Computer circuitry (e.g. including CPU 35) which, based on inputs (@ 30) from a user, coordinates (via elements 14 and 19-30) the display/presentation of teletext and/or viewdata images, which images are locally generated from the stored first information, with the display/presentation of the demodulated video component (@21) of the received TV programming; and
- 4) Display circuitry (@ 31) for outputting the resulting combined multi-media presentation to the user.

II. Differences:

Claim 2 differs from the showing of Tsuboka et al. only in that Tsuboka et al. did not indicate a process in which the coordinated display of teletext/viewdata and video was produced based on the a “determined” content of the TV programming.

III. “Program-related” videotext data:

The examiner takes Official Notice that it was notoriously well known to those of ordinary skill in the art at the time of applicant’s alleged invention for conventional teletext services to have carried “program-related” teletext pages; i.e. pages having a “content” that is related to the “content” of associated TV

programming.³⁷ Robinson et al. evidences the fact that it was known for the associated TV programming to have a "content" that explicitly refers to the associated "program-related" videotex pages; e.g.

"Viewers could get the latest details on breaking stories or more detail on stories that interest them. News programs on television could refer a viewer to these pages to get the detail that is cut out due to time limitations"
[lines 18-20 of the first column on page 300 of Robinson et al.]

In accessing such a page, the user inherently selected the program-related videotex page by:

1) "**Determining a content**" of the TV programming medium; i.e. the user determines that the content of the TV programming contains explicit reference to (i.e. an "identifier" of) the program-related teletext page that was to be selected by the user.

IV. Obviousness:

It would have been obvious to one of ordinary skill in the art to have used the receiver circuitry described in Tsuboka et al. for the intended purpose of receiving and displaying conventional videotex data, wherein the "program-related" videotext data described in Robinson et al. obviously represented a specific example/subset of the conventional videotex data that was to be received and displayed by the Tsuboka et al. receiver.

E-33) Claims 3, 5-8, and 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuboka et al. [JP 55-45248] in view of the 1979 article "TOUCH-TONE' TELETEXT: A COMBINED TELETEXT-VIEWDATA SYSTEM" to Robinson et al. for the same reasons that were set forth for claim 2 above.

³⁷ e.g. Note: lines 12-20 of the second column on page 30 of the 1976 article "Oracle on Independent Television" by Green et al.; lines 2-7 on page 26 of WO 81/02961 to Campbell et al.; etc,...

E-34) Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuboka et al. [JP 55-45248] in view of the 1979 article “TOUCH-TONE’ TELETEXT: A COMBINED TELETEXT-VIEWDATA SYSTEM” to Robinson et al. for the same reason that is set forth for claim 2 above. The following is noted:

- a) The system disclosed by Tsuboka et al., modified by Robinson et al., inherently included conventional TV video and audio component processing circuitry for processing the received TV signal to provide a first TV media presentation having an “identifier” therein (i.e. containing the explicit reference to a program-related videotext image);
- b) The user of the system disclosed by Tsuboka et al., modified by Robinson et al., processed the identifier to identify “content” of the TV programming (i.e. the user processed the explicit reference contained therein to identify the page number of the program-related videotex page that is to be inputted/selected by the user;
- c) The user then entered the page number into the receiver (@ 37) upon which said receiver, under control of the software being executed by CPU (35), caused the program-related videotext image “medium” to be provided in a coordinated fashion with the TV programming “medium”; and
- d) The output device (31) for outputting the resulting combined medium presentation to the user.

E-35) Claims 21-23, 37, 67, 68, and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuboka et al. [JP 55-45248] in view of the 1979 article “TOUCH-TONE’ TELETEXT: A COMBINED TELETEXT-VIEWDATA SYSTEM” to Robinson et al. for the same reason that is set forth for claim 20 above. The following is noted:

E-36) Claims 2 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Betts et al. [GB 1,556,366] in view of the “MODE II” captioning feature of the “ANTIOPE” teletext standard as discussed in: the 1980 article “Development & Applications of the Antiope-Didon Technology” by Guillermin; the 5/1981 “CBS/CCETT NORTH AMERICAN BROADCAST TELETEXT SPECIFICATION (EXTENDED ANTIOPE)” publication; and the 1980 article entitled “ANTIOPE TELETEXT CAPTIONING” by Sechet.

I. The showing of Betts et al.:

Betts et al. has been cited as evidencing the fact that it was widely known to those of ordinary skill in the art, at the time of applicants' alleged invention, that it was both desirable and advantageous to have implemented teletext receiving/decoding circuitry using a software driven CPU/computer in place of dedicated circuitry [NOTE: lines 50-54 and 70-74 on page 1].

II. “MODE II” captioning:

1) Those of ordinary skill in the art, at the time of applicant's alleged invention, had recognized that there was a need and desire to transmit closed captioning data pertaining to multiple different languages within each TV program transmission. Because teletext captions had to be transmitted sequentially through the TV network, it was found to be difficult to simultaneously synchronize the display of the different captions/languages to the same TV programming. Hence, a “Mode II” captioning feature was developed and added to new teletext “standards” (e.g. ANTIOPE) for the expressed purpose of synchronizing multiple captions to the same program.

“The possibilities of teletext closed captioning for the hearing-impaired and for foreigners are well known and were first experimented in the United Kingdom. The problem of synchronizing the TV program and the captions was not really solved, except at the price of heavy time delay constraints. If several different languages are to be captioned at the same time with a given program, new developments are needed, because asynchronism appears for multilanguage captioning applications. The new standards make it very simple to add sophisticated captioning options to a normal teletext decoder: in this

new process, the synchronism control signal are completely separate from the 'character attributes' - they are actually considered as a 'message attribute'.

[e.g. section 5.1.3 on page 33 of the 3/1980 publication "Development & Application of the Antiope-Didon Technology]

2) The way in which these "new" teletext standards solved the synchronism problem was best explained among the prior art of record by the "CBS/CCETT NORTH AMERICAN BROADCAST TELETEXT SPECIFICATION (EXTENDED ANTIOPE)" which is dated May 20, 1981. [SEE: sections 7.0-7.3 on pages 135-138; and sections 8.9.1 to 8.9.2.2.2 on pages 159-162]. That is, as explained within this publication:

a) Different classes of captioning (and different levels thereof) were transmitted from the transmitter as conventional teletext pages prior to the time that they were to be displayed;

b) Each receiver captured and stored (but did not display) the page of teletext data which corresponded to the class (and the level) of captioning that was selected and desired by the user;

c) At the desired time of display, a "reveal"/"unmask" message was transmitted from the transmitter station which caused/triggered the stored captions at the respective receivers stations to be simultaneously outputted and displayed in precise synchronism with the TV programming.

That is, the Mode II captioning feature provided the mechanism by which multiple program related captions could now be transmitted sequentially and asynchronously within the TV programming, while enabling each of these sequentially transmitted captions to be displayed simultaneously and in precise synchronism with the same TV programming at different receiver stations in response to the receipt of the same reveal/unmask display signal.

3) The 8/1980 publication "ANTIOPE TELETEXT CAPTIONING" also describes this same "MODE II" captioning feature of the ANTIOPE teletext standard. This

publication has been cited in response to arguments that have been submitted by applicants throughout the present prosecution.³⁸ Namely:

a) This publication makes it clear that the "MODE II" captioning feature of ANTIOPE utilizes the same teletext equipment that is used for the teletext service itself being that the captions are transmitted as standard teletext pages.

"When Antiope is employed for captioning, it uses the same equipment as for teletext" (the second column of page 618)

"Each caption is broadcast in the form of a page which is identical to a teletext page. The page number is used to select the language - this is the number the user keys on the decoder keypad. The operation is the same as for the selection of a teletext page; the decoder functions are identical" (the first column of page 619)

b) This publication makes it clear that all the teletext pages of the ANTIOPE standard were transmitted within the "discrete teletext transport packets" of the DIDON standard and that even the shortest of the captions (i.e. the word "yes") had to be transmitted using more than one of these discrete DIDON transport packet.

"The word 'yes', wherever it is located on the screen, if it is white on black, is coded in 23 bytes (i.e. 1.15 DIDON packets), and text containing 40 characters requires 60 bytes (i.e. 3 packets)" (the second column on page 619)

c) This publication re-emphasizes that it was the ability of the ANTIOPE system to mask (conceal) and unmask (reveal) teletext messages which enabled the ANTIOPE system to separate the act of transmitting messages/captions from the act of displaying them (i.e. a key feature that is vital to the implementation of the MODE II captioning).

"Considerable flexibility is also given by the use of text masking and unmasking attributes. They enable us to differentiate reception, which can be stored, from display, which is requested"

³⁸ E.G., applicants' have attempted to distinguish the claimed invention over applied teletext prior art by arguing that the signals of teletext are not conveyed within pluralities of discrete packet signals that, therefor, must be assembled/re-assembled on the receiver side of the network. As is evident from the cited prior art, applicants' argument is simply untrue (i.e. even the shortest of teletext messages were conveyed within a plurality of discrete teletext packet signals).

a particular moment without being dependent on the time of transmission" (page 619)

III. Applicants' Disclosed Invention and MODE II captioning:

1) In applicants' disclosed "WALL STREET WEEK" application, a "command signal" was embedded, at a specific time, within the "Wall Street Week" TV program being broadcast from a transmitter station. At each receiver station, said "Wall Street Week" program was received and the "command signal", embedded therein, was detected. At each receiver station, the detected

"command signal" triggered a locally generated user specific graphic to be displayed as an overlay over the displayed video portion of said received "Wall Street Week" program. Thus, via the embedding of a single "command signal", the display of different locally generated user specific overlays at different receiver stations were all "synchronized" to occur at said specific time within the "Wall Street Week" program.

2) As is clearly evident from the prior art of record, the MODE II captioning feature of the ANTIOPE teletext standard also utilized a single common display "command signal" to cause different "locally generated" program related teletext captioning images to be simultaneously overlaid at respective TV receiver stations in precise synchronism with the TV programming to which they relate.

Namely, in mode II captioning, reveal/unmask "command signals" were embedded, at specific times within, a transmitted TV program being broadcast from a transmitter station. At each receiver station, said program was received and the reveal/unmask "command signals", embedded therein, were detected. At each receiver station, each detected reveal/unmask "command signal" triggered a locally generated user specific graphic (e.g. a respective "program related caption") to be displayed as an overlay over the displayed video portion of said received TV program. Thus, via the embedding of each reveal/unmask "command signal", the displays of different "locally generated" user specific overlays at different receiver stations were all "synchronized" to occur at the specific times within the TV program.

IV. Obviousness:

Given the known advantages provided thereby, the examiner maintains that it would have been obvious to one of ordinary skill in the art to have utilized computer implemented teletext receivers/decoders, e.g. of the type described in Betts et al., for receiving and displaying conventional teletext data of the "ANTIOPE" teletext standard including conventional "Mode II"

captioning provided therein.³⁹ Such computer implemented teletext receivers/decoders would have necessarily comprised:

1) Circuitry/software for receiving a plurality of signals from an external signal source

[i.e. the teletext receiver/decoder necessarily receives the TV programming containing the mode II captioning];

2) Circuitry/software for storing information from the received plurality of signals corresponding to a first media

[i.e. the teletext receiver/decoder necessarily receives and stores that portion of the Mode II captioning that pertains to the language and level selected by the user];

3) Circuitry/software for determining "content" of a second medium received in said plurality of signals

[i.e. as in the case of applicants' own alleged invention, this limitation refers to nothing more than the detection of the "display control signal" being that said display control signal at least represents the "content" of the audio component of the TV programming to which the locally generated images/captions are to be synchronously displayed];

4) Circuitry/software for coordinating, under the computer implemented receiver/decoder control, the display of the stored information with said second medium

[i.e. the computer implemented decoder necessarily coordinates the display of the Mode II captions with the displayed audio and video component of the received TV programming in response to the received "display control signal" (i.e. the "reveal"/"unmask" signals of Mode II captioning)]; and

5) Circuitry for outputting the multimedia presentation to the respective user base on the step of coordinating

[i.e. the receiver/decoder necessarily comprises a display device for displaying the resulting captioned TV presentation].

And, for completeness of the record, the examiner continues to reject applicants' assertion that teletext images, e.g. such as *ANTIOPE* captions, were not "locally generated" images, because teletext images clearly were "locally generated" images. [SEE: paragraph 13 of this Office action].

³⁹ Note too that section 5.3.1.2 on page 47 of the 8/1981 "EIA System Analysis Chart" publication indicates that a "computer/software" implementation was "mandatory" for "System C" teletext decoder applications.

E-37) Claims 3-8, 11, 12, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Betts et al. [GB 1,556,366] in view of the “MODE II” captioning feature of the “ANTIOPE” teletext standard as discussed in: the 1980 article “Development & Applications of the Antiope-Didon Technology” by Guillermin; the 5/1981 “CBS/CCETT NORTH AMERICAN BROADCAST TELETEXT SPECIFICATION (EXTENDED ANTIOPE)’ publication; and the 1980 article entitled “ANTIOPE TELETEXT CAPTIONING” by Sechet, for the same reasons that were set forth for claims 2 (and 13-16) above. Further, the following is noted:

1) With respect to claim 6: The examiner maintains that it would have been obvious for the received TV programming to have been “Network” TV programming rebroadcast to the receivers/decoders video local/intermediate TV stations as was notoriously well known in the art;

2) With respect to claims 7 and 8: As noted above, with respect to applicant own alleged invention (i.e. the alleged section 112 support), the recited “content” merely refers to the fact that the “display command signal” of applicant’s “Wall Street Week” embodiment arguably identified location of a “content” in the audio/video components of the TV programming with which the display of the “locally generated” images are to be synchronized. The same is true of the “display control signal” of Mode II captioning too; i.e. the display control signal (i.e. the reveal/unmask signal) identifies the location of a “content” of the audio/video components of the TV programming with which the display of the Mode II captions are to be synchronized;

3) With respect to claims 11 and 12: The examiner maintains that a teletext channel is, by definition, a “digital data channel”.

4) With respect to claims 17 and 18: The examiner takes Official Notice that it was notoriously well known in the TV art to have been desirable to have included video recording devices at household receiving locations for recording broadcasted TV programming for later/delayed playback (i.e. for the convenience of the users). The examiner maintains that it would have been obvious for the TV programming being provided to the mode II captioning receiver to have comprised such conventionally recorded/delayed TV programming.

E-38) Claims 37-41 and 67-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Betts et al. [GB 1,556,366] in view of the “MODE II” captioning feature of the “ANTIOPE” teletext standard as discussed in: the 1980 article “Development & Applications of the Antiope-Didon Technology” by Guillermin; the 5/1981 “CBS/CCETT NORTH AMERICAN BROADCAST TELETEXT SPECIFICATION (EXTENDED ANTIOPE)” publication; and the 1980 article entitled “ANTIOPE TELETEXT CAPTIONING” by Sechet, for the same reasons that were set forth for claims 3-8, 11, 12, 17, and 18 above.

E-39) Claims 70-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Betts et al. [GB 1,556,366] in view of the “MODE II” captioning feature of the “ANTIOPE” teletext standard as discussed in: the 1980 article “Development & Applications of the Antiope-Didon Technology” by Guillermin; the 5/1981 “CBS/CCETT NORTH AMERICAN BROADCAST TELETEXT SPECIFICATION (EXTENDED ANTIOPE)” publication; and the 1980 article entitled “ANTIOPE TELETEXT CAPTIONING” by Sechet, for the same reasons that were set forth for claims 2 (and 13-16) above. Further, the following is noted:

- 1) The recited “second medium” of the claims reads on the teletext service of the prior art that is providing the teletext data stream that includes the MODE II captions;
- 2) The recited “information” of the claims, i.e. that is “generated based on identifying content of said second medium”, reads on the respective caption information that is selectively captured at each receiver pertaining to a specific “content” of the “second medium” (i.e. a specific language/level of captioning) that is identified by the respective receiver stations based on inputs inputted by the user;
- 3) The recited “first medium” of the claims reads on the TV programming that has been captioned using MODE II captioning; and
- 4) The recited “identifier” of the claims reads on the reveal/unmask code which identifies a “content” of the second medium (i.e. a specific location therein as in the case of applicant’s own alleged invention as argued under section 112-1) at

which the display of the locally generated MODE II captions are to be simultaneously displayed at the respective receiver locations.

E-40) Claims 85-90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Betts et al. [GB 1,556,366] in view of the "MODE II" captioning feature of the "ANTIOPE" teletext standard as discussed in: the 1980 article "Development & Applications of the Antiope-Didon Technology" by Guillermin; the 5/1981 "CBS/CCETT NORTH AMERICAN BROADCAST TELETEXT SPECIFICATION (EXTENDED ANTIOPE)" publication; and the 1980 article entitled "ANTIOPE TELETEXT CAPTIONING" by Sechet, for the same reasons that were set forth for claims 70-72 above.

E-41) Claims 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over the 1979 publication entitled “TELESOFTWARE: HOME COMPUTING VIA BROADCAST TELETEXT” by Hedger in view of the 1980 publication entitled “A Public Broadcaster’s View of Teletext in the United States” by Gunn et al. and the 1975 U.K. Patent document #1,405,141 to Yoshino et al.

I. The Showing of Hedger:

Hedger evidences the fact that it was notoriously well known in the art:

- a) To have provided a software driven “computer” at each of respective TV receiver locations of a TV network (note figure 1); and
- b) To have used the pages of a standard teletext service as the transport vehicle for downloading computer software (i.e. “Telesoftware”) to said respective computers [see the discussion under the heading “1. INTRODUCTION” on page 279].

II. The Showing of Gunn et al:

Gunn et al. evidences the fact that it was known in the art for “Telesoftware” (i.e. computer software downloaded within via a standard teletext data service) to be associated with broadcast TV programming and, thereby, “program related”. For example, in a Gunn et al. “Wall Street Week” application, each user at a respective TV receiver station location:

- a) Downloaded specific program related “Telesoftware”, e.g. software for analyzing a stock portfolio, to the computer at their receiving station location; and
- b) Received verbal instruction from a guest on the broadcasted “WALL Street Week” TV show explaining exactly how to use this downloaded software to analyze their stock portfolio,

Whereby each user utilized the downloaded software to perform the respective analysis concurrent with the TV program and the verbal instruction provided therein.

[SEE: the “WALL STREET WEEK” application that is described in lines 2-17 on the fifth page of the Gunn et al. publication].

III. The Showing of Yoshino et al.:

Yoshino et al. not only disclosed a television receiver station which operated to simultaneously display on a single CRT (18) locally generated image data provided from an "electronic table computer" and the video signal component of a received television signal,

"The present invention also provides a television receiver on the picture tube of which a television program and the result of the computing process are shown simultaneously"
[lines 11-113 on page 4]

but Yoshino et al. also explicitly evidences the fact that those of ordinary skill in the art had understood it to be "advantageous", e.g. as of its 1975 publication date, to have enabled locally generated image data from a computer to be superimposed upon displayed TV programming at TV receiving stations.

"As described above there is obtained various advantages such as.....the display of computed information on the picture tube of a television receiver in superposition with the television program"
[lines 68-80 on page 4]

IV. Obviousness:

1) One of ordinary skill in the art would have understood the fact that the receiver structure shown in figure 1 of Hedger was implemented for the generic purpose of receiving and executing "Telesoftware" pertaining to *any* application and was not limited only to the specific applications that were discussed in the publication. [e.g. note the discussion under the heading "6. APPLICATIONS FOR TELESOFTWARE" on page 285]

One of ordinary skill in the art would have recognized the fact that the program related "Telesoftware" of the "WALL Street Week" application described in Gunn et al. merely represents a program related "Telesoftware" application that was not explicitly described/exemplified within the Hedger publication itself.

Being such, the examiner maintains that it would have been obvious to one of ordinary skill in the art one of ordinary skill for the conventional Telesoftware receiver structure of Hedger to have been utilized to receive and execute the "Telesoftware" pertaining to the "Wall Street Week" application that was described in Gunn et al. When executing Telesoftware pertaining to "program related" applications, it would have been obvious, and in fact necessary, to have enabled the display device in Hedger's figure 1 (i.e. the "Television Receiver") to simultaneously display the computer generated video and the received "Wall Street Week" TV programming; i.e. a display feature that, as evidenced by Yoshino et al., was notoriously well known in the TV/Computer display arts.

2) With respect to the limitations of claims 2, the following is noted:

a) The step of "receiving" a plurality of signals is met by the modified system of Hedger being that said modified system necessarily receives the broadcasted "WALL STREET WEEK" programming and the standard teletext service that provides the required program related "Telesoftware";

b) The step of "storing" information is met by the modified system of Hedger being that said modified system necessarily received, extracted, and stored the machine code pertaining to the downloaded program related "Telesoftware";

c) The step of "determining content" of the second medium is met by the modified system of Hedger being that said user of the modified system necessarily determines "audio" content of the received TV programming when receiving the verbal instruction;

d) The step of "coordinating", under computer control, a presentation using the stored information with the second medium based on the determined content is met by the modified system of Hedger being that said user of the modified system necessarily controls the computer to analyze his portfolio and create displays thereof based on the determined instruction content of the audio; and

e) The step of "outputting" is met by the modified display device the modified Hedger system for reasons that are fully addressed above.

E-42) Claims 3, 5-8, and 11-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the 1979 publication entitled "TELESOFTWARE: HOME COMPUTING VIA BROADCAST TELETEXT" by Hedger in view of the 1980 publication entitled "A Public Broadcaster's View of Teletext in the United States" by Gunn et al. and the 1975 U.K. Patent document #1,405,141 to Yoshino et al.

1) With respect to claim 6: The examiner maintains that it would have been obvious for the received TV programming to have been "Network" TV programming rebroadcast to the receivers/decoders video local/intermediate TV stations as was notoriously well known in the art;

2) With respect to claims 11 and 12: The examiner maintains that a teletext channel is, by definition, a "digital data channel".

3) With respect to claims 17 and 18: The examiner takes Official Notice that it was notoriously well known in the TV art to have been desirable to have included video recording devices at household receiving locations for recording broadcasted TV programming for later/delayed playback (i.e. for the convenience of the users). The examiner maintains that it would have been obvious for the TV programming being provided to the mode II captioning receiver to have comprised such conventionally recorded/delayed TV programming.

E-43) Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hutt et al. [U.S. #3,961,137] in view of Betts et al. [GB 1,556,366]

I. The showing of Hutt et al.:

As is shown in figures 1 and 6, Hutt et al. disclosed a receiver station for outputting/displaying a multimedia presentation [i.e. the "VIDEO AND SUPERIMPOSED TEXT" signal of figure 4], wherein the receiver station is "adapted to " receive a plurality of signals [i.e. within element 11 of figure 4], which received signals are transmitted to the receiver station from an external TV transmitting station source [not shown]. These received signals are provided to element 12 of figure 4. The receiver station comprises:

- 1) Circuitry for receiving the plurality of signals [within element 11] wherein the received signals include a first digitally encoded text-type media and a second analog video type media;
- 2) Circuitry [e.g. the "PAGE STORE" of figure 6 that is located within the "TEXT SIGNAL GENERATOR" of figure 4] for storing information of the digitally encoded text-type media;
- 3) Circuitry for detecting [i.e. thereby "determinining"] the sync signal "content" of the video-type media [the "Sync. Separator" of figure 4];
- 4) Circuitry [i.e. figure 6] for coordinating the generation of the multimedia presentation using the stored information and the sync signal content [e.g. the "LINE SYNC" and the "FIELD SYNC" of figure 6] that as detected/"determined" above; and
- 5) Outputting the so coordinated multi-media presentation so that the that portion of the presentation which is provided by the information has a predetermined relationship to said detected/"determined sync signal contents [note that the portion of the presentation that is generated from the stored information necessarily has a specific time relationship to the detected/determined sync signal content of the video media in order for it to have been properly superimposed over the video].

II. Differences:

Claim 2 differs from the showing of Hutt et al. only in that claim 2 recites that the "coordinating step is performed at the receiver station under "computer control".

III. Obviousness:

At the time of applicant's alleged invention, it was widely recognized by those of ordinary skill in the art that "computer" implementations of text receiving and generating circuitry of the type described in Hutt et al. had real advantages over the dedicated circuit approach [SEE: lines 50-55 on page 1 of Betts et al.]. In light of such knowledge, the examiner maintains that it would have been obvious to one of ordinary skill in the art to have implemented the the text receiving and generating circuitry in Hutt et al. via a computer to obtain those same advantages (i.e. "simplification").

E-44) Claims 3-6, 11 -14, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hutt et al. [U.S. #3,961,137] in view of Betts et al. [GB 1,556,366] for the same reason that was set forth for claim 2 above. Additionally, the following is noted:

1) With respect to claims 6 and 18: It is noted that most conventional TV stations which broadcast/cablecast TV signals to household receiving location are intermediate station in that they re-broadcast Network TV programming that is broadcasted to them.

One of ordinary skill in the art would have understood the fact that the "receiver station" described by Hutt et al. was intended for use in such conventional TV networks.

2) With respect to claims 13 and 14: The examiner note that the sync signal components of a video signal are "identifiers" which identify the specific sync/timing content of the video signal.

E-45) Claims 2, 3, 4, 10, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujino et al. [U.S. #4,675,737].

I. The showing of Fujino et al.:

As is shown in figures 1, Fujino et al. disclosed a receiver station for outputting a multimedia presentation (note lines 1-16 of column 3). The receiver station is "adapted to receive a plurality of signals" in that it comprises:

1) A video reproducing apparatus (e.g. 1 of figure 1) which receives a first signal representing an encoded video signal "media", wherein the first

signal is received from an external source via a first recording medium (e.g. via a video disc); and

2) A supplemental apparatus (e.g. 2 of figure 1) which receives a second signal representing encoded textual "media", wherein the second signal is received from an external source via a second recording medium (e.g. the ROM cartridge 65 of figure 2).

In operation, the receiver station operated to:

- a) To receive said plurality of signals comprised of at least two media as has addressed above;
- b) To store textual "media" from the second signals via latching circuitry (e.g. 52 and 53 of figure 2);
- c) To determine "content" of a second medium within said plurality of signals wherein this limitation read on:
 1. The sync separator 12 of figure 2 which detects (and thereby "determines") the sync signal content of the video signal "media"; or
 2. Data detection circuitry (e.g. 13, 20, 22 of figure 2) which detects (and thereby "determines") a data signal content of the video signal "media";
- d) To coordinate, via the determined sync and data contents, the display/presentation of the stored information with the display/presentation of the video signal media; and
- e) Outputting the coordinated presentations as said multimedia presentation.

II. Differences:

Claims 2-4, 10, and 17 differ from the showing of Fujino et al. only in that the claim recites "a computer" wherein the supplemental circuitry of figure 2 in Fujino et al., e.g. as illustrated, seems to be implemented using dedicated circuitry.

III. Obviousness:

The examiner takes Official notice that it was notoriously well known in the signal processing art to have used software driven "computers" in place of dedicated

hardware when implementing signal processing circuitry; i.e. wherein the "computer" implementation was known to have been advantageous in its flexibility (i.e. the software could be easily upgraded and modified). The

examiner maintains that it would have been an obvious choice of design to have implemented the processing circuitry shown in figure 2 of Fujino et al., i.e. in place of dedicated circuitry, to obtain advantages associated therewith.

E-46) Claims 7, and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujino et al. [U.S. #4,675,737] for the same reasons that were set forth for claims 2-4, 10, and 17 above.

a) With respect to claim 7: It is noted that the audio signal of TV programming is inherently used to explain the action that is occurring within the video portion. Since subtitle information is a text version of the audio, the subtitle information also explains said video action.

b) With respect to claims 13-15: It is noted that data detection circuitry (e.g. 13, 20, 22 of figure 2) detects an "identifier" that is embedded within the video signal wherein the identifier identifies, directly and indirectly, time and audio content of the video signal.

E-47) Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over the notoriously well known "Mode II" captioning feature of a conventional ANTIOPE teletext data service (as discussed in paragraph D-2 of this Office action) in view of notoriously well known computer driven Teletext decoder structure (as discussed in paragraph C-4 of this Office action). Specifically, the following is noted:

I. Mode II captioning of ANTIOPE:

At the time of applicant's alleged invention, one of ordinary skill in the art would have recognized the fact that the "MODE II" captioning feature of ANTIOPE, as described within the prior art that was discussed in paragraph D-2 of this Office action, necessarily included the following structure:

- a) TV signal transmission circuitry that was required to transmit:
 - 1) The video programming signals that were to be captioned via the explicitly described program related MODE II captioning; and, embedded therein,
 - 2) The packets of teletext data signals which carried the teletext information of the ANTIOPE teletext service including the explicitly described teletext information of said MODE II captioning; and
- b) A multiplicity of TV receiving household TV receiver stations each of which included:
 - 1) A respective one of the explicitly described multiplicity of teletext data decoders each of which, as described, necessarily operated to:
 - a. Receive the transmitted video and teletext signal from the TV signal transmitter;
 - b. Extract the embedded packets of ANTIOPE teletext data therefrom;
 - c. Decode the extracted packets to detect instruction information pertaining to the user specified type of captioning, e.g. the "language" and "level" of captioning, that was selected by the respective user;

- d. Capture/store, but not displaying, the detected user specified instruction information in memory;
- e. Decode subsequent ones of the extracted packets to detect the described "reveal" command which corresponds to the "class" of the user selected captioning (corresponding to the recited step of "determining content");
- f) Provide the captured instruction information to a character generator to locally generate image data representing the user specific captioning signals; and
- g) Transmit the locally generated user specific captioning image signals to an "output display device" for display with the video programming signal of the received TV programming thereby providing a coordinated multimedia presentation (e.g. captioned video).

II. Differences:

Claim 2 differs from MODE II captioning of ANTIOPE as discussed above only in that it is unclear whether the "MODE II" feature of ANTIOPE constituted a "basic" or "intermediate" level feature that could be performed by a "basic" or "intermediate" level ANTIOPE decoder or, alternatively, whether the MODE II captioning feature constituted an "advanced" level feature which had to be performed by an "advance" level ANTIOPE decoder. Thus, it is unclear whether or not a "computer" implementation of an ANTIOPE decoder which performed MODE II captioning was "mandatory"/required.

III. Obviousness:

Regardless, for the reasons discussed in paragraph C-4 of this Office action, the examiner maintains that having implemented the ANTIOPE decoder for MODE II captioning using a "computer" represented, at best, a notoriously well known and obvious choice of design given the well known advantages associated therewith.

E-48) Claims 3-8, 11-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the notoriously well known "Mode II" captioning feature of a conventional ANTIOPE teletext data service (as discussed in paragraph D-2 of this Office action) in view of notoriously well known computer driven Teletext decoder structure (as discussed in paragraph C-4 of this Office action), for the same reasons that were set forth for claim 2 above. Specifically, the following is noted:

- 1) With respect to claims 3 and 4, the examiner notes that a "computer" is simply a device that computes. Thus, the question as to whether the "memory" of the decoder is part of the "computer" or peripheral to the "computer" is merely a question of semantics.
- 2) With respect to claim 6, the examiner notes that TV receivers typically received their TV signals from local TV stations that were "intermediate" to a major national network station. It would have been obvious to one of ordinary skill in the art for the TV signal in the modified system set forth above to have been received from the local station of such a typical TV network.
- 3) With respect to claims 7 and 8, it is noted that the audio content of the audio portion of a TV programming, and hence the captioning portion thereof too, inherently functions to provide a verbal explanation of the programming.
- 4) With respect to claims 11 and 12, it is noted that the teletext service is inherently provided via a digital data channel.
- 5) With respect to claims 13-16, it is noted that the "reveal" code(s) of the prior represent "identifier(s)" [e.g. for example, they identify a time in the second medium (i.e. the TV programming signal) signal at which program related captions are to be displayed].
- 6) With respect to claims 17, it is noted that it was notoriously well known in the TV art to have recorded transmitted TV programming via a VCR to have allowed the transmitted programming to be reproduced at a time that is more convenient to the user. The examiner maintains that it would have been obvious for the TV programming of the modified prior art to have been recorded at at least some of the receiver station in this notoriously well known fashion.

7) With respect to claims 18, it is noted that "cable" is a known and obvious way in which TV programming signals were transmitted to households from intermediate TV stations.

E-49) Claims 20-23, 37-41, 67-72 and 85-90 are rejected under 35 U.S.C. 103(a) as being unpatentable over the notoriously well known "Mode II" captioning feature of a conventional ANTIOPE teletext data service (as discussed in paragraph D-2 of this Office action) in view of notoriously well known computer driven Teletext decoder structure (as discussed in paragraph C-4 of this Office action), for the same reasons that were set forth for claims 3-8 and 11-18 above. The following is noted:

1) Each page of displayable Teletext data, including each page of caption data, inherently represents a series of instructions which must be executed by the teletext decoder in order to locally generate a corresponding displayable image [see paragraph C-3 of this Office action];

2) In MODE II captioning, each the "reveal" codes represent a "control signal" which identifies content of the first TV signal medium (e.g. a timing content, an audio content, etc, ...), and which causes the instructions from a series of caption pages to be executed by the decoder (i.e. by the "computer" implemented decoder) so as to generate a corresponding series of caption images;

Wherein the caption images of MODE II captioning, by definition, are displayed over the video component of the TV signal with which it is "related" so as to create a combined multimedia (video/text/graphic/audio) presentation.

E-50) Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over the 1979 publication “The Concept of a Universal ‘Teletext’ (broadcast and interactive Videotex) Decoder, Microcomputer Based” by Marti in view of the notoriously well known Mode II Captioning feature of the ANTIOPE teletext standard as described in the 1981 “CBS/CCETT NORTH AMERICAN BROADCAST TELETEXT SPECIFICATION (EXTENDED ANTIOPE)” publication.

I. The showing of Marti:

Marti recognized the fact that “all” videotex decoders have a similar structure.

“A decoder for Videotex services, (whatever the name given to the various systems, Teletext, Antiope, Viewdata, T.V. text, ...) is composed of four main parts:

- **a data acquisition unit;**
- **a processing unit;**
- **a page store;**
- **a display processor.”**

[see the last 8 lines on page 1 of the publication]

Based on this recognition, Marti describes and illustrates the “universal” videotex decoder structure of figure 3 that comprises a software driven microprocessor/“computer” [see section “3” of the publication and, in particular, section 3.2 of the publication]. As described, the “universal” decoder could be configured (and/or reconfigured) to decode and display “any” kind of videotex data/services simply by programming (and/or re-programming) the microprocessor/“computer” of the universal decoder with the appropriate application specific software [note lines 3-22 on page 6 of the publication]. Marti also taught a process by which the application specific software was provided to the decoder from:

- 1) a local memory (cassette or bubble); or
- 2) from “the line (broadcast or telephone)”.

[see lines 13-14 on page 6 of the publication]

One of the specific applications that is described as being provided for is “software” pertaining to the decoding and display of ANTIOPE videotext data [e.g. lines 3-8 on page 6 of the publication].

II. The showing of the “CBS/CCETT” publication:

The examiner takes Official Notice that the “MODE II” captioning feature of the ANTIOPE videotext specification was notoriously well known in the art at the time of applicant’s alleged invention; i.e. evidence of this fact being illustrated by the cited “CBS/CCETT” publication [note pages 135-138 therein].

In MODE II captioning:

- 1) Different "pages" of program related teletext information, pertaining to different classes and levels of captioning, are superimposed onto the TV programming signal to which they are related as part of a normal ANTIOPE teletext service;
- 2) The combined TV signal transmission is distributed to a plurality of receiver locations, at least some of which include ANTIOPE videotex decoders which are capable of displaying "MODE II" captioning;
- 3) Each of the decoders that are capable of displaying MODE II captioning, received an input from its respective user specifying the class and level of captioning which he/she desires;
- 4) Each of the MODE II capable decoders then receives and captures, but does not display, the "page" of data which corresponds to the specific class and level that its user selected;
- 5) Upon the detection and receipt of a subsequently transmitted "reveal" command, each of said MODE II capable decoders then executes the captured page of data pertaining to its user selected class and level of captioning to generate and output respective user specific image data that is displayed, in a coordinated fashion, over (i.e. "boxed" or "keyed" into) the video "data" component of the TV signal within which it was embedded.

III. Obviousness:

When implementing the "universal" decoder that was described by Marti, to receive, decode, and display ANTIOPE videotext data as was also described by Marti, it would have been obvious to one of ordinary skill for the software being loaded into the decoder to have included programming needed to execute any and all of the features that were defined by ANTIOPE specification. More specifically, given the showing above, the examiner maintains that it would have been obvious to one of ordinary skill in the art to have programmed the "universal" decoder of MARTI with software which enabled the "universal" decoder to have received and displayed "MODE II" captioning according to the ANTIOPE videotex specification.

E-51) Claims 3-8, 11-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the 1979 publication “The Concept of a Universal ‘Teletext’ (broadcast and interactive Videotex) Decoder, Microcomputer Based” by Marti in view of the notoriously well known Mode II Captioning feature of the ANTIOPE teletext standard as described in the 1981 “CBS/CCETT NORTH AMERICAN BROADCAST TELETEXT SPECIFICATION (EXTENDED ANTIOPE)” publication, for the same reason that was set forth for claim 2 above. Specifically, the following is noted:

1) With respect to claims 3 and 4, the examiner notes that a “computer” is simply a device that computes. Thus, the question as to whether the “memory” of the decoder is part of the “computer” or peripheral to the “computer” is merely a question of semantics.

2) With respect to claim 6, the examiner notes that TV receivers typically received their TV signals from local TV stations that were “intermediate” to a major national network station. It would have been obvious to one of ordinary skill in the art for the TV signal in the modified system set forth above to have been received from the local station of such a typical TV network.

3) With respect to claims 7 and 8, it is noted that the audio content of the audio portion of a TV programming, and hence the captioning portion thereof too, inherently functions to provide a verbal explanation of the programming.

4) With respect to claims 11 and 12, it is noted that the teletext service is inherently provided via a digital data channel.

5) With respect to claims 13-16, it is noted that the “reveal” code(s) of the prior represent “identifier(s)” [e.g. for example, they identify a time in the second medium (i.e. the TV programming signal) signal at which program related captions are to be displayed].

6) With respect to claims 17, it is noted that it was notoriously well known in the TV art to have recorded transmitted TV programming via a VCR to have allowed the transmitted programming to be reproduced at a time that is more convenient to the user. The examiner maintains that it would have been obvious for the TV programming of the modified prior art to have been recorded at at least some of the receiver station in this notoriously well known fashion.

7) With respect to claims 18, it is noted that "cable" is a known and obvious way in which TV programming signals were transmitted to households from intermediate TV stations.

E-52) Claims 20-23, 37-41, 67-72, and 85-90 are rejected under 35 U.S.C. 103(a) as being unpatentable over the 1979 publication "The Concept of a Universal 'Teletext' (broadcast and interactive Videotex) Decoder, Microcomputer Based" by Marti in view of the notoriously well known Mode II Captioning feature of the ANTIOPE teletext standard as described in the 1981 "CBS/CCETT NORTH AMERICAN BROADCAST TELETEXT SPECIFICATION (EXTENDED ANTIOPE)" publication, for the same reasons that were set forth for claims 3-8 and 11-18 above. The following is noted:

1) Each page of displayable Teletext data, including each page of caption data, inherently represents a series of instructions which must be executed by the teletext decoder in order to locally generate a corresponding displayable image [see paragraph C-3 of this Office action];

2) In MODE II captioning, each the "reveal" codes represent a "control signal" which identifies content of the first TV signal medium (e.g. a timing content, an audio content, etc, ...), and which causes the instructions from a series of caption pages to be executed by the decoder (i.e. by the "computer" implemented decoder) so as to generate a corresponding series of caption images;

Wherein the caption images of MODE II captioning, by definition, are displayed over the video component of the TV signal with which it is "related" so as to create a combined multimedia (video/text/graphic/audio) presentation.

Double Patenting:

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

E-53) Claims 2-18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 of U.S. Patent No. #4,694,490. Although the conflicting claims are not identical, they are not patentably distinct from each for the following reasons:

The examiner maintains that the meaning of the instant claims is confusing and is not immediately apparent due to the fact that the claims have been drafted using terms/recitations that are not supported by the instant specification as originally filed (SEE paragraph E-2 of this Office action). However, when one considers the claims in light of the alleged section 112-1 support currently argued by applicants' and their expert, their alleged meaning becomes more apparent. Specifically, in the response of 1/29/2003, applicants have alleged/indicated that claims 2-18 of the instant application are supported by the "Wall Street Week" processing/embodiments of both the 1981 and the instant 1987 CIP disclosures [SEE: Exhibit II and Tab "F" of the 1/29/2003 communication]. From these allegations, it is apparent that:

- a) The section 112 support for the recited "stored information of the first medium" of the instant claims is nothing more than the users locally stock portfolio information;

- b) The section 112 support for the recited "presentation using said information" of the instant claims is nothing more than the locally generated overlay showing how the users portfolio performed;
- c) The section 112 support for the recited "second medium" of the instant claims is nothing more than the "WALL Street Week" TV programming;
- d) The section 112 support for the recited "determination" of "content" of the "second medium" of the instant claims is nothing more than the detection of the "graphics-on" instruction signal which, because it occurs in synchronism with specific content of the TV programming, is allegedly used at the receiver station (via its detection) to "determine" the content of the "Wall Street Week" programming to which it is synchronized (i.e. specifically an audio content);
- e) The section 112 support for the recited "coordination" of presentation based on the detected content of the instant claims is nothing more than the process of overlaying the first presentation (i.e. the graphic showing the users portfolio performance) over the second presentation (the "Wall Street Week" programming) based on said determined "content" (i.e. which is, again, nothing more than the detected "graphics on" signal) to produce and output the "Multimedia" presentation (i.e. which is nothing more than the "combined" presentation).

When the alleged section 112 support for the limitation of instant claims 2-18 have been identified in this manner, it becomes apparent that the instant claims have simply adopted different language to recite/describe the same receiver side "Wall Street Week" overlay method/processing that has already been covered/recited via claims 1-13 of U.S. Patent #4,694,490 - note too that claims 9-13 of said US Patent appear to invoke a more comprehensive section 112 (paragraph 6) "means-plus-function" interpretation.

E-54) Claims 20-30, 33-42, and 67-104 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 of U.S. Patent No. #4,694,490 for the same reasons that were set forth for claims 2-18 above.

E-55) The art of record has been applied to the claims to the extent of the examiner's understanding given the section 112 problems which have been noted above.

E-56)


Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

E-57) Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID E HARVEY whose telephone number is (703) 305-4365. The examiner can normally be reached on M-F from 9 AM to 6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile can be reached on 703 305-4380. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


DAVID E HARVEY
Primary Examiner
Art Unit 2614

xxx

APPENDIX I: (The 1981 and 1987 CIP "WALL STREET WEEK" applications)

The respective 1981 and 1987 "Wall Street Week" embodiments of the discarded 1981 parent specification and the instant 1987 CIP specification:

A) The 1981 "Wall Street Week" application:

The 1981 "Wall Streets Week" application was described with respect to figure 6c of the 1981 specification, via columns 19 and 20 of the specification as contained in U.S. Patent #4,694,490 [namely, column 19, line 31 to column 20, line 11]. As described in this 1981 specification:

1) The 1981 microcomputer (205) of the 1981 receiver station operated to receive each day, via a digital information channel, all closing stock prices applicable that day. This receiving step was accomplished directly from the digital channel or by automatic query to a data service. In either case, the 1981 microcomputer (205) recorded the stock prices that pertained to its stored stock portfolio;

[SEE: lines 35 -41 of column 19]

2) The 1981 microcomputer (205) was **pre-programmed** to respond to the 1981 instruction signals that were transmitted in the "Wall Street Week" program transmission;¹

[SEE: lines 41-44 of column 19].

3) At the beginning of the 1981 "Wall Street Week" program transmission, the 1981 decoder (203) of the 1981 receiver detected several instruction signals embedded in the programming transmission and transferred these detected instruction signals to the 1981 **pre-programmed** microcomputer (205). These received instruct signals instructed the 1981 microcomputer to generate several overlays being that the 1981 microcomputer had been provided with the means to generate such overlays. Said 1981 microcomputer (205) was also provide with the means to supply these generated overlays to the 1981 TV set (202) when commanded to do so. The 1981 TV set (202) was provided with the means to display the provided overlays.

[SEE: lines 45-53 of column 19]

4) Within the 1981 "Wall Street Week", i.e. subsequent to the beginning, the host says, "Here is what the Dow Jones Industrials did this past week," and a studio generated graphic is pictured/transmitted. The host then says, "Here is what the broader NASDAQ did," and a studio generated graphic overlay is displayed on top of the pictured/transmitted first graphic.

¹ The "preprogramming" of the 1981 microcomputer represents an extremely significant difference between the 1981 and the 1987 "Wall Street Week" applications. In the 1987 application, the 1987 embedded instruction signals provided the software that was used to program the microcomputer of the 1987 embodiment on the fly [e.g. note lines 1-21 on page 24 of the instant 1987 specification]

Then the host says, "Here is what your portfolio did." At this point a 1981 instruction signal was generated at the originating studio and transmitted in the programming. This transmitted instruction signal was identified at the 1981 receiver station by the 1981 decoder (203) and then transferred, via the 1981 processor (204) to the 1981 microcomputer (205). This 1981 instruction signal instructed the 1981 microcomputer (205) to transmit a first generated overlay to the 1981 TV set (202) for as long as the microcomputer (205) received the same instruction from the processor (204). As a result of this process, the user sees the 1981 microcomputer generated graphic of his own stock's performance overlaid on the studio generated graphic. When the studio generated graphics are no longer displayed, the 1981 studio simply stopped sending the 1981 instruction signal. This caused:

- a) The 1981 microcomputer (205) to cease transmitting its own graphic to the 1981 TV set (202); and
- b) The 1981 microcomputer (205) to prepare to send a next locally generated graphic overlay to the 1981 TV set (202) upon instruction from the studio.

[SEE: the description that starts on line 53 of column 4 and extend to line 7 of column 20]

B) The instant 1987 CIP "Wall Street Week" application:

The 1987 "Wall Streets Week" application is *initially* described (i.e. introduced) by the instant 1987 specification, with respect to figure 1 of the 1987 specification, and via pages 19-28 thereof. Further details/discussions of this 1987 "Wall Street Week" application are found throughout the 1987 specification. Simply by volume of description, it is immediately apparent that the description of the 1987 "Wall Street Week" application has, in the words of applicants, been extensively "expanded", "enhanced", "improved" when compared to the description of the 1981 "Wall Street Week" application of the discarded parent specification. The true magnitude to which the 1987 descriptions have been "expanded"/"enhanced"/"improved" starts to emerge when one compares the 1987 descriptions as exemplified below with the scant 1981 description that have been cited above. That is, as described in the instant 1987 CIP specification:

1) The 1987 microcomputer (205) of the 1987 receiver station includes a 5 ¼" floppy disk at a designated one of its disk drives that holds a data file, wherein this data file contains "information" on a portfolio of "financial instruments" owned by the "subscriber". This stored "information" of financial instruments identifies the particular stocks owned by the subscriber, the number of shares of each stock that are owned by the subscriber at the close of each business day, and the closing share prices applicable each day;

[SEE: lines 5-14 on page 21 of the instant 1987 CIP specification]

2) The 1987 decoder (203) which is itself preprogrammed to detect digital information on a particular line or lines in the VBI of video programming received thereat. In addition to detecting the information, the 1987 decoder is preprogrammed to correct errors in the detected information, to convert the information into digital signals that are usable by the 1987 microcomputer (205), and to input said so produced digital signals to the asynchronous communications adaptor of said 1987 microcomputer (205).

[SEE: lines 14-24 on page 21 of the instant 1987 CIP specification]

3) At the beginning of a 1987 "Wall Street Week" programming transmission, the 1987 originating studio generates and embed "a first series of control instructions" wherein the instructions of this first series are addressed to, and control, the 1987 microcomputer (205) of each 1987 subscriber station.

[SEE: lines 1-8 on page 22 of the instant 1987 CIP specification]

4) A tuner (215) of the 1987 receiver receives the "Wall Street Week" transmission and converts it into a received video and audio signal. The video component is then divided by the 1987 divider and is supplied to

both an input of the 1987 microcomputer (205) and the input of the 1987 decoder (203).²

[SEE: lines 19-27 on page 22 of the instant 1987 CIP specification]

5) The "first set of instruction commands", i.e. presumably from said "first series of control instructions", causes the 1987 microcomputer (205) at each of the 1987 receiver stations to interrupt the operation of its CPU, and any other designated processor contained therein, so as to effect a "warm boot." This first set of instruction commands being labeled "control invoking instructions" by the 1987 CIP specification.³

[SEE: line 28 of page 22 to line 26 of page 23 in the instant 1987 CIP specification]

6) Subsequent to transmission of the first set of embedded instructions, a "second set of instructions" is embedded at, and transmitted from said 1987 program originating studio. This second set is received by the 1987 decoder (203) at each 1987 receiver station where it is detected and converted into usable digital signals which are provided to the 1987 microcomputer (205). The 1987 microcomputer evaluated the initial word(s) therein which instruct the 1987 microcomputer to load and run "the information of a particular set of instructions" that follow the initial word.

[SEE: line 35 on page 23 to line 10 on page 24 of the instant 1987 CIP specification]

This 1987 "set of instructions", the one that is loaded and run by the 1987 microcomputer (205), receives the label "program instruction set" and comprises downloaded program related "computer software" pertaining to the specific program into which it was embedded (namely, the 1987 "Wall Street Week" application).

[SEE: line 5 on page 24 to line 8 on page 25 of the instant CIP specification]

7) The 1987 microcomputer (205) at each of the 1987 receiver stations runs this downloaded software which causes the 1987 microcomputer (205) to process said "information" that was stored as a data file on its 5 1/4" floppy disc and to generate and store graphic image data that is then

² While elements of the 1981 and 1987 specification share common labels and reference numerals, they are by no means the same in structure of operation. For example, the 1987 microcomputer (205) receives the video signal from the 1987 divider (4) because it was the 1987 microcomputer which operated to overlay its locally generated graphics on the received video whereas, in contrast, the 1981 microcomputer (205) did not receive the video signal because it was the 1981 TV set which operated to overlay the locally generated graphics from the 1981 microcomputer (205) over the received video signal; i.e. clearly, the 1987 microcomputer (205) is different from the 1981 microcomputer (205).

³ The apparent interchangeable use of the "command" and "instruction" terminology here begs to question whether there is any difference between "a command" and "an instruction".

stored within the RAM the 1987 microcomputer's graphic card; i.e. the image that is shown in figure 1A of the 1987 specification which comprises "a line" on a transparent/"black" background. Once the graphic is generated and stored, the 1987 microcomputer (205) commences waiting for further instructions to be provided from the 1987 decoder (203).
[SEE: line 22 on page 24 to line 22 on page 25 of the instant 1987 CIP disclosure]

8) Subsequent to the generation of the graphic image data at the 1987 receiver stations, the host of the "Wall Street Week" program says, "Now as we turn to the graphs, here's what the Down Jones Industrials did in the week just past," and a 1987 studio generated graphic, i.e. that of figure 1B of the 1987 specification, is transmitted. Then the host says, "And here is what your portfolio did." At this point an "instruction" signal is generated at the 1987 originating studio, embedded in the "Wall Street Week" programming, and transmitted to the 1987 receiving stations.
[SEE: line 23 on page 25 to line 1 on page 26 of the instant 1987 CIP specification]

9) This last named 1987 "instruction signal" is identified by the 1987 decoder (203), is transferred to the 1987 microcomputer, and is "executed" by the 1987 microcomputer (205) as a "Graphic On" signal. At this point the 1987 microcomputer itself overlays its generated graphic stored in its graphic card onto the video signal received from the 1987 divider (4), e.g. via the 1987 microcomputer's (205) "PC-Microkey 1300", to generate a combined video presentation that is provided to a 1987 TV monitor (202M).
[SEE: lines 1-11 on page 26 of the instant 1987 CIP specification]

This last named "Graphic On" *instruction signal* being labeled a "combining sync *command*" due to the fact that it synchronized the combining operation at the receiver stations.⁴
[SEE: lines 20-24 on page 26 of the instant 1987 CIP specification]

10) At some subsequent point in time a "further instruction signal" is generated, embedded, and transmitted to the 1987 receiving stations wherein this "further instruction signal" is executed as a "Graphics Off" signal. This caused the 1987 microcomputer (205) to cease the overlaying of its generated graphic.⁵
[SEE: line 33 on page 26 to line 9 on page 27 of the instant 1987 CIP specification]

⁴ Again, there seems to be no difference in the way "command" and "instruction" are being used (i.e. they seem to be used interchangeably).

⁵ This represents another clear difference between the 1987 and 1981 embodiments. That is, in the 1981 embodiment one continuously transmitted instruction signal was used to identify the beginning and end of the overlay period whereas in the 1987 embodiment a first instruction signal marked the beginning and a second instruction signal marked the end of the overlay period.

C) The respective 1981 and 1987 signaling of the respective 1981 and 1987 "Wall Street Week" applications:

1) The discrete 1981 "Signal Units" and "Signal Words" signaling technology of the 1981 "WALL STREET WEEK" application:

With respect to the 1981 systems, all of the 1981 instruction, identification, and information signals that were embedded within the VBI of the TV programming appear to have been simple discrete digital codes that were to be located and identified on the receiving side of the system in order to trigger/cue a corresponding response thereat. These simple codes were labeled: "signal units". Not surprisingly, a simple transmission scheme comprised of "signal words" was used by the 1981 systems to convey these "signal units" as embedded data through the 1981 transmission networks.

That is, to transmit the 1981 "signal units", the bits from one or more "signal unit" were organized into one or more discrete strings of bits. Each of these discrete bit strings was then embedded, at a respective discrete time and/or location, within the transmitted TV programming as a "signal word". Specifically, as defined and used within the 1981 specification, each "signal word" represented a respective occurrence/"appearance" of ancillary signaling within the distributed programming:

"The term 'signal word' hereinafter means one full discrete appearance of a signal as embedded at one of time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. Such strings may or may not have predetermined data bits to identify the beginnings and ends of words. Signal words may contain parts of signal units, whole signal units, or groups of partial and whole signal units or combinations" ⁶ [note lines 3-12 of column 3 in US Patent #4,694,490]

⁶ "The term 'signal units' hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a unique purchase order number identifying the prior use of a programming unit, or a general instruction identifying whether a programming unit is to be retransmitted immediately or recorded for delayed transmission." [note: lines 64-68 of column 2 and lines 1-3 of column 3 in US Patent #4,694,490; and lines 25-32 of the instant disclosure]

2) The discrete 1987 "SPAM" packet signaling technology of the 1987 CIP "WALL STREET WEEK" application:

The 1987 instruction and information signals that were embedded in the VBI of the TV programming of the 1987 systems were not limited to simple digital codes as in the 1981 inventions. Most notably, the 1987 instruction signals explicitly included long sequences of assembled machine code representing computer software.

Clearly, such 1987 instruction and information code sequences was not conducive to being handled and transmitted as 1981 "Signal Units"/"Signal Words" and indeed, as is evident by the 1987 CIP disclosure, it was not. To the contrary, the 1987 CIP specification introduces a new sophisticated transmission packets structure, i.e. the 1987 "SPAM" packet structure of figures 2E-2K of the 1987 specification, which appears to be the "real" mechanism by which the 1987 instruction, identification, and information signals were (and had to be) conveyed within the programming.

> Here, it must be noted that the 1981 definition of "signal word" has been inserted into the "summary" section of the instant 1987 CIP specification [SEE: line 25 on page 14 to line 6 on page 15 of the instant 1987 specification]. In fact, not only has this 1981 "signal word" definition been inserted into the 1987 CIP specification, but some effort has been made early in the 1987 CIP specification to:

a) Suggest that the 1981 "signal word" technology might be used in some undefined manner convey all of the 1987 instruction and information signaling, e.g. including 1987 "computer software", through the 1987 networks as an alternative to the disclosed 1987 "SPAM" packet transport mechanism; and/or

b) Suggest that the 1987 "SPAM" transport mechanism actually comprises the 1981 "signal words" in a way that is never defined, described, addressed, or developed within the 1987 CIP disclosure.

[e.g. note line 1-6 on page 22 of the instant 1987 CIP specification]

Regardless of motive, the examiner maintains that the presence of the 1981 "signal word" terminology within the 1987 CIP specification is a red herring for the following reasons:

A) The 1987 specification never explains how the 1981 "signal word"/ "signal unit" technology was, or even could be used, to convey the long sequences of digital code which comprised the 1987 CIP instruction, identification, and information signals. That is while the described 1981 "signal word" technology seems more than adequate to handle the transmission of the simple 1981 digital codes that comprise the auxiliary signaling of the 1981 inventions, this 1981 technology seems woefully inadequate to handle the longer sequences of data (i.e. the "computer software") which comprised the 1987 instruction and information signals given:

1) The rigid synchronous format of the 1981 "signal words"; and

2) The fact, because of this synchronous format, that all the 1981 microcomputers on the receiving side of the 1987 system had to be preprogrammed so as to know exactly where to look for the digital code(s), or fragments thereof, that were to be received (i.e. as to which bit locations of which "signal word" appearances each digital code, or fragment thereof, was to be found).

[The more sophisticated asynchronous nature of the 1987 SPAM transport scheme effectively eliminates this problem];

B) Since the 1981 "signal word" technology is woefully inadequate to handle the 1987 signaling, then it would seem that the described 1987 "Wall Street Week" application discussed above has serious section 112-1 problems and, thus, that claims supported therefrom should be rejected under section 112-1 accordingly. However, this is not true, because the 1987 CIP specification effectively removes such 112-1 issues via its subsequent descriptions in which the 1987 disclosure makes it clear that it is the 1987 "SPAM" packet signals, and not the 1981 "signal words", that are actually being used as the transport mechanism for the 1987 inventions. For example:

1. First, immediately following the above noted 1987 "WALL STREET WEEK" description, the 1987 CIP specification introduces and describes a new 1987 "SPAM" packet technology that is clearly capable of handling the long sequences of code which comprise the new 1987 signaling; and

2. After introducing this new "SPAM" technology, the 1987 CIP specification continues its description of the 1987 "Wall Street Week" application in a way which not only incorporates the initial 1987 discussion of the application that was cited above, but which leaves no doubt that it is the new "1987 SPAM" technology that is being utilized by this 1987 "Wall Street Week" application [SEE lines 7-24 on page 354 of the 1987 CIP specification];

C) The 1981 definition of "signal word" not only defines the term "signal word" to have an unconventional 1981 meaning, but explicitly indicates that this unconventional 1981 definition will be adopted and used consistently, thereafter, throughout the disclosure.

"The term 'signal word' hereinafter means one full discrete appearance of a signal as embedded at one of time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. Such strings may or may not have predetermined data bits to identify the beginnings and ends of words. Signal words may contain parts of signal units, whole signal units, or groups of partial and whole signal units or combinations" (emphasis added)

[note lines 3-12 of column 3 in US Patent #4,694,490]

The 1981 disclosure is true to the 1981 "signal word" definition in that the "signal word" terminology was actually used throughout the *discarded* 1981 specification in this explicitly defined unconventional manner.

This same 1981 "signal word" definition was carried forward into the "summary" section of the instant 1987 CIP specification too [e.g. note lines 52-61 in column 8 of US patent #5,233,654]. However, in the case of the instant 1987 disclosure, the reproduced 1981 "signal word" definition was true to the definition in that throughout the remainder of the 1987 CIP disclosure the "signal word" terminology was not used as defined but was, instead, used

in a conventional manner to refer to bytes of digital data. This fact further shows/suggests that the 1981 "signal word" definition from the 1981 specification was "cosmetically" copied into the instant 1987 CIP specification; i.e. that the 1981 definition of "signal word" is out of place within the context of the 1987 disclosure and, more particularly, the "present invention" described therein.

D) The instant 1987 CIP specification explicitly defines the 1987 "SPAM" acronym to be:

"Signal Processing Apparatus and Methods of the present invention" (emphasis added)

[e.g. note page 40 of the instant 1987 CIP specification]

That is, **by definition**, the "SPAM" acronym actually refers to the SPAM systems and methods described in the 1987 CIP specification that comprise its "present invention". And what discrete signals do 1987 "SPAM" systems and methods utilize? Obviously, they utilize the "SPAM signals" that are also described therein - the "signals" of said SPAM ("Signal Processing Apparatus and Methods of the present invention").

Said "SPAM signals" of the "SPAM" systems/methods being those that are explicitly shown and described with respect to figures 2E-2K of the instant 1987 specification.

Thus, the 1987 "SPAM" acronym itself, as coined by and used throughout the 1987 specification, provides an explicit indication that the "present invention" of the 1987 CIP specification pertained to the "SPAM" system/methods and the discrete "SPAM" signaling described therein.

Given the above, it is maintained that the section 112 support for the "discrete"/"embedded"/"instruct"/"command"/"control" signal recitations of the pending claims comes, necessarily, from the 1987 "SPAM signals" of figures 2E-2K and not from the 1981 "signal word" (or definition thereof) as has been alleged by applicant's when attempting to establish section 120 priority back to the 1981 effective filing date. [SEE, for example, item "47)" on page 18 of Exhibit II in the response filed 1/9/203 in 08/470,571].

xxx

APPENDIX II: (SECTION 120 PRIORITY AND CASE LAW)

A. Applicants' claim to the 1981 priority date under Section 120, whenever alleged, should be based on the "adequate written description" requirement of Section 112-1 which has been incorporated into Section 120 (as opposed to the "anticipation" standard provided for under Section 102):

1) Section 120 provides a tool whereby claims of a second application are entitled to the earlier filing date of a first application with, and only with, respect to "common subject matter." That is, the filing date of the first application is preserved in the second application only for that subject matter described in the second application that was previously described in the first application. Section 120 does not provide an avenue whereby the subject matter described in the first application is magically carried forward into the written description of the second application (i.e. the written description of the second application must incorporate the description from the first application either physically or by reference). Nor does section 120 provide an avenue for surreptitiously adding new matter to an existing written description without the loss of the original filing date with respect to the added "new matter."⁷

"Section 120 merely provides mechanism whereby application becomes entitled to benefit of filing date of earlier application disclosing same subject matter; common subject matter must be disclosed in both applications, either specifically or by express incorporation by reference of prior disclosed subject matter; nothing in Section 120 itself operates to carry forward earlier application; it contains no magical disclosure -- augmenting powers able to pierce new matter barriers; therefor, it cannot "limit" absolute and express prohibitions against new matter contained in Section 251."

[Dart Industries, Inc. v. Banner, Commissioner of Patents and Trademarks, (CA DC), 207 USPQ 273]

It is unclear as to how much (if any) of the subject matter that was described in the 44 pages of applicant's 1981 parent application was actually carried forward into the 557 pages of the instant 1987 CIP specification in a form that does not constitute "New Matter". That is, it is unclear as to which (if any) of the currently pending claims are directed *solely* to subject matter from the 1981 specification that has been carried forward into the instant 1987 specification. The reason for the confusion stems from the fact that:

(1) The 1981 parent specification was not incorporated into the 1987 specification formally or in any immediately discernible fashion;

⁷ Wherein "new matter" is, by definition, "matter involving a departure from or in addition to the original disclosure" [37 C.F.R. 1.118]

(2) Those portions of the 1987 descriptions which look as though they might have originated from the 1981 parent specification have themselves been thoroughly intermixed with new 1987 subject matter during their migration to the 1987 specification that they too appear to constitute "new matter"; and

(3) Applicants make no attempt to show that any of the pending claims are directed *solely* to subject matter described in the instant 1987 CIP specification that was previously described in their 1981 parent specification; i.e. to prove that the subject matter now being claimed is in fact "common subject matter". Instead, applicants have elected:

(a) To submit parallel 1981 and 1987 citations of alleged section 112-1 support for each of the claim in question, wherein these parallel 1981 and 1987 citations point to different 1981 and 1987 subject matter from the 1981 parent and 1987 CIP specifications; and

(b) To argue that the examiner's position concerning the need for a showing of "common subject matter" under section 120 to be wrong.

That is, all of applicants' attempts to establish section 120 "priority" back to the 1981 parent specification for the pending amended claims in question, appear to be based on an erroneous standard. Namely, applicants have presented showings that do not even attempt to present the standard of proof that is needed to establish priority under section 120. That is, providing evidence that given claims meet the requirements of section 120 is a "burden" that falls to applicant (and not the examiner) whenever "priority" under section 120 is alleged by the applicants.

"A party who, like Hiraga, relies on an earlier-filed application under 35 U.S.C. 119 or 120 has the burden to show that the foreign or patent application supports later-added claims under 35 U.S.C. 112-1"

[Utter v. Hiraga 6 USPQ 2d 1709, 1713 (Fed. Cir. 1988)]

2) Applicants continue to allege that the written description requirement of section 112-1, e.g. that which has literally been incorporated into section 120, permits applicants to obtain priority to the 1981 effective filing date of the parent application by demonstrating that each pending amended claim, i.e. each claim that for which the 1981 date is sought, can be given respective 1987 and 1981 claim interpretations which permit the claim to be read, separately, on different

1987 and 1981 subject matter from the different 1987 and 1981 specifications. Specifically, applicants have taken the positions: (1) that there is nothing in Section 120 which requires the respective 1987 and 1981 written descriptions being relied upon for establishing "priority" to be the same and/or equivalent; and (2) that, being such, it is improper for the examiner to compare the respective 1981 and 1987 disclosures being relied upon to determine whether or not it is "common subject matter".

"[Section] 120 does not require an applicant to demonstrate that the disclosures relied upon under §120 have anything in common besides their ability to separately comply with §112-1 with respect to the claims for which priority is sought. Accordingly, the Examiner's focus on comparing the support from the two applications for similarity or common subject matter is improper and irrelevant because all applicants are required to do is satisfy §120 is show that each disclosure meets the requirements of §112-1 for a given claim." (emphasis added)

[Page 141 of applicant's response filed on 1/28/2002 in application S.N. 08/470,571]

"Accordingly, the law requires a two part test in which the applicant separately demonstrates § 112 support for each application. In the FOA, the examiner distorts this straightforward test by imposing a third element of the test whereby the § 112 support from each application consists of 'common subject matter.'"

[see the last 10 lines on page 137 of the response filed on 1/28/2002 in SN 08/470,571].

The examiner continues to disagree with applicants' positions. Specifically, the examiner notes:

(A) That the need to compare the disclosure of the CIP application with that of the parent application, to ensure that "common subject matter" is being claimed, is a necessary inquiry that must be made when determining the validity of an allegation to "priority" made under section 120.

"The inquiry required by section 120 demands a comparison of 1) the claims of the parent and CIP applications and 2) any other disclosures made in the applications such as specification and drawing. Acme Highway, supra, at 1079, 167, USPQ at 132-33."
[Stern v. Superior Distributing Company et al., (CA 6), 215 USPQ 1089 at 1094]

(B) That, in taking the positions cited above, applicants appear to have confused the showing that is needed for "anticipation" under section 102

A-15

(where a showing of "common subject matter"/"the same invention" is not required) with the showing that is needed to establish "priority" to an earlier filing date under section 120 (where a showing of "common subject matter"/"the same invention" is required).

(C) The mere fact that a claim can be broadly drafted in a subsequent CIP application so as to "generically" read on different subject matter from an earlier filed parent application too (i.e. to be "anticipated" within the meaning of section 102) does not necessarily mean that said claim is entitled to the earlier filing date of the parent [note: *Tronzo v. Biomet Inc.*, (CA FC), 47 USPQ2d 1829]. Hence, applicants' parallel citations of alleged claim support that are based on different 1987 and 1981 subject matter, at best, only established the fact that the claims are "anticipated" by the respective 1981 and 1987 disclosures in a section 102 sense. The parallel citations do not establish the fact that the claims are supported by "common subject matter" found in both specifications as is actually required for section 120 priority.

3) Throughout the present prosecution, the examiner has noted many differences and *inconsistencies* that exist between applicants' instant 1987 CIP specification and applicants' 1981 parent specification. For example: ***all*** of the "systems and methods" that are described in the 1987 disclosure utilize 1987 "control and instruct signaling" that conveys an "expanded"/broadened range of information including, most significantly, downloadable software; b) The meaning and definitions explicitly given to terminology that is used to describe the 1987 systems/methods in the 1987 specification has itself been "expanded"/broadened with respect to the same terminology used to describe the 1981 systems/methods in the 1981 disclosure, thereby *quietly* imparting "expanded"/broadened meaning to most (if not all) of the 1987 descriptions [e.g. terms such as "programming", signal "words", etc, ...]; c) ***All*** of the 1987 systems/methods utilize the more advanced 1987 "SPAM" transmission packet technology which enables the 1987 systems and methods to dynamically transport carry the "expanded"/broader form 1987 "control and instruct signals" (i.e. "software"), and enables the 1987 systems/methods to operate within a "expanded"/broader range of disclosed communication system environments [i.e. the 1987 systems and methods are explicitly described within environments outside radio and television whereas the previously described 1981 systems/methods were not). These "expanded"/broadened descriptions expand and broaden the descriptions of ***all*** of the 1987 systems/methods within the instant 1987 CIP specification to a point where the 1987 descriptions themselves appear to constitute "new matter" (with respect to the 1981 parent). The following is noted:

"In 1967, the Court of Custom and Patent Appeals first separated a new written description (WD) requirement from the enablement requirement

of [Section] 112. The reason for this new judge-made doctrine needs some explanation. Every patent system must have some provision to prevent applicants from using the amendment process to update their disclosures (claims or specification) during their pendency before the patent office. Otherwise applicants could add new matter to their disclosures and date them back to their original filing date, thus defeating accurate accounting of the priority of invention."

[Enzo Biochem Inc. v. Gen-Probe Inc. 63 USPQ2d 1618,1624 (CA FC 2002)]

"New matter is matter involving a departure from or in addition to the original disclosure"

[37 C.F.R. 1.118]

"To the extent that a CIP application adds new matter, claims that are dependent upon the new matter are entitled to the filing date of the CIP only and not that of the parent application"

[Stern v. Superior Distributing Company et al., (CA 6), 215 USPQ 1089 at 1094]

"A continuation-in-part application is not entitled to the benefit of the earlier filing date of its parent application where the changes included within subsequent applications are 'new matter' which either alters the substance of the invention or makes the composition an invention for the first time, as opposed to the situation in which the subsequent application merely contains either a language change not effecting the meaning of the prior application or a specification which narrows the scope of that which was previously claimed.

[Indiana General Corp. v. Krystinel Corp., 161 USPQ 82, 94-95]

And, because the specification of the 1981 parent application was not carried forward during the drafting of the 1987 CIP, it is the "new" written description of the 1987 CIP systems and methods alone which must describe that which is now claimed in accordance with requirements of 112-1; i.e. necessarily making that which is now claimed the much improved/enhanced/expanded 1987 systems and methods of the 1987 CIP specification. Why should/would these improved/enhanced/expanded 1987 CIP systems and methods be entitled to the 1981 filing date of the lesser 1981 systems and methods whose descriptions were literally left behind during the drafting of the instant 1987 CIP specification? In any event, by electing to leave the 1981 written description behind during the drafting of the instant 1987 CIP, applicants have not only forfeited their right to now claim any 1981 subject matter that is determined not to have been carried forward into the 1987 CIP, but applicants have made "their" burden of establishing proof of section 120 priority a heavy one indeed. That is, by failing to incorporate the 1981 description into the 1987 CIP application, applicants need to prove (as opposed to allege) that that which is now claimed is directed solely

to 1981 systems and methods from the discarded 1981 specification whose descriptions have actually been carried forward into the 1987 CIP.

4) In reviewing case law, one finds that the courts have warned everyone again and again not to confuse the issue of "anticipation" under section 102 with the issue of adequate "written description" under section 112-1 as incorporated into section 120. To this point, when current applicants show that the recitations of a given claim can be separately read on different subject matter from their two very different 1987 and 1981 specifications⁸, applicants have at best only established the fact that the given claim's recitations are in some way "anticipated" by different 1987 and 1981 subject matter. Such a showing fails to establish priority under section 120. Namely, applicants have failed to establish, as fact, that the "subject matter" being claimed comprises "common subject matter" that is "adequately described" in accordance with section 112-1 by both the 1987 and the 1981 disclosures:

"However, as mentioned earlier, a continuing application is entitled to rely on the earlier filing date of an earlier application only with respect to subject matter common to both applications" (emphasis added)

[In *Transco Products, Inc., v. Performance Contracting, Inc.*, 32 USPQ2d 1077 [**18]]

"Any claim in a continuation-in-part application that is directed solely to subject matter adequately disclosed under 35 U.S.C. 112 in the parent application is entitled to the filing date of the parent application."

[In *Transco Products, Inc., v. Performance Contracting, Inc.*, 32 USPQ2d 1077 [**18]]

"Assuming the common inventorship, copendency, and cross-reference required by section 120, that section further requires only that the invention be disclosed in the parent application in such manner as to comply with the first paragraph of section 112 and be the same invention as that disclosed in the later application." (emphasis added)

[*Kirschner*, 305 F.2d 897 (C.C.PA1962)]

5) Again, turning to the case law, it seems quite apparent that whenever a claim for priority under section 120 is made to an earlier filed application in a Continuation-In-Part (CIP) application, the validity of the claim is determined in the following manner:

A) First, the court turns to the disclosure of the CIP application in order to determine precisely what the "subject matter" is that is being claimed.

⁸ i.e. the instant 1987 CIP disclosure and the past 1981 disclosure of the parent.

Namely, in accordance with section 112-1, the CIP disclosure must provide a "description" of that which is being claimed by the claims in the CIP application and, therefor, the court turns to said CIP specification to locate the required description of that which is claimed; and

B) Having determined from the CIP application precisely what the *described* "subject matter" is that is being claimed, the court then turns to the disclosure of the parent application to determine whether this same "subject matter" was previously described in disclosure of the parent application in the same or equivalent fashion. Only if the answer to this determination is "yes" is priority to the filing date of the parent accepted/established.

As can be seen, the process used by the courts effectively compares the disclosure of the CIP application with the disclosure of the parent application to ensure that the invention that is described/claimed in the CIP application is the same subject matter that was previously described in the parent application.

"The inquiry required by section 120 demands a comparison of 1) the claims of the parent and CIP applications and 2) any other disclosures made in the applications such as specification and drawing. Acme Highway, supra, at 1079, 167, USPQ at 132-33."

[Stern v. Superior Distributing Company et al., (CA 6), 215 USPQ 1089 at 1094]

The above process/standard applied by the courts is, however, far different from the process/standard/showings put forth by applicants. According to applicants, one establishes section 120 priority by *blindly* identifying separate 1987 and 1981 grounds of alleged "claim support" wherein the respective grounds of claim support may be based on vastly different subject matter described in the respective specifications:

"[Section] 120 does not require an applicant to demonstrate that the disclosures relied upon under §120 have anything in common besides their ability to separately comply with §112-1 with respect to the claims for which priority is sought. Accordingly, the Examiner's focus on comparing the support from the two applications for similarity or common subject matter is improper and irrelevant because all applicants are required to do is satisfy §120 is show that each disclosure meets the requirements of §112-1 for a given claim."

(emphasis added)

[Page 141 of applicant's response filed on 1/28/2002 in application S.N. 08/470,571]

"Accordingly, the law requires a two part test in which the applicant separately demonstrates § 112 support for each application. In the FOA, the examiner distorts this straightforward test by imposing a third

element of the test whereby the § 112 support from each application consists of 'common subject matter.'"

[see the last 10 lines on page 137 of the response filed on 1/28/2002 in SN 08/470,571].

As currently understood by the examiner, it appears that applicants have failed to heed the warnings of the court and have confused the issue of "anticipation" under section 102 (i.e. where a showing of "common subject matter" is not required) with the issue of "adequate written description" of section 112-1 as literally incorporated into section 120 (i.e. where a showing of "common subject matter" is unquestionably required).

6) Again, applicants take the position that there is nothing in section 120 which requires the respective 1987 and 1981 written descriptions relied upon to be the same and/or equivalent.

"[Section] 120 does not require an applicant to demonstrate that the disclosures relied upon under §120 have anything in common besides their ability to separately comply with §112-1 with respect to the claims for which priority is sought. Accordingly, the Examiner's focus on comparing the support from the two applications for similarity or common subject matter is improper and irrelevant because all applicants are required to do is satisfy §120 is show that each disclosure meets the requirements of §112-1 for a given claim."

(emphasis added)

[Page 141 of applicant's response filed on 1/28/2002 in application S.N. 08/470,571]

If such a position were true, then there would be nothing in the law to prevent an inventor from "surreptitiously expanding a patent" through the filing of one or more CIP applications. Indeed, in such a world, one could describe and claim the proverbial "apples" in a later filed CIP application and obtain the earlier filing date of a parent application which only described the proverbial "oranges" via nothing more than the act of creative claim construction [i.e. as was noted in the *Interview Summary* of 6/29/00 (paper # 27) in SN 08/487,526]. However, preventing an inventor from improperly using section 120 in this fashion is one of the historical reasons why the "adequate written description" requirement of section 112-1 was incorporated into section 120 in the first place: e.g.

"Unlike the enablement provision of section 112, where the disclosure of a single species might be sufficient to enable a practitioner skilled in the art to make and use any member of the genus,....., the written description requirement of section 112 requires more. See *Vas - Cath, supra*. This strict reading of the written description requirement prevents an inventor from surreptitiously expanding a patent through successive continuation-in-parts. See *Id.* At 1562. Essentially, it limits the claims of an applicant to those inventions he clearly discloses, either expressly or inherently" (emphasis added)

[Tronzo v. Biomet Inc. (DC SFla) 41 USPQ2d 1403 ⁹ citing Vas-Cath Inc. v. Mahurkar (CA FC) 19 USPQ2d 1111]

“Section 120 merely provides mechanism whereby application becomes entitled to benefit of filing date of earlier application disclosing same subject matter; common subject matter must be disclosed in both applications, either specifically or by express incorporation by reference of prior disclosed subject matter; nothing in Section 120 itself operates to carry forward earlier application; it contains no magical disclosure – augmenting powers able to pierce new matter barriers; therefor, it cannot “limit” absolute and express prohibitions against new matter contained in Section 251.”

[Dart Industries, Inc. v. Banner, Commissioner of Patents and Trademarks, (CA DC), 207 USPQ 273]

“A continuation-in-part application is not entitled to the benefit of the earlier filing date of its parent application where the changes included within subsequent applications are ‘new matter’ which either alters the substance of the invention or makes the composition an invention for the first time, as opposed to the situation in which the subsequent application merely contains either a language change not effecting the meaning of the prior application or a specification which narrows the scope of that which was previously claimed. [Indiana General Corp. v. Krystinel Corp., 161 USPQ 82, 94-95]

“In 1967, the Court of Custom and Patent Appeals first separated a new written description (WD) requirement from the enablement requirement of [Section] 112. The reason for this new judge-made doctrine needs some explanation. Every patent system must have some provision to prevent applicants from using the amendment process to update their disclosures (claims or specification) during their pendency before the patent office. Otherwise applicants could add new matter to their disclosures and date them back to their original filing date, thus defeating accurate accounting of the priority of invention.”

[Enzo Biochem Inc. v. Gen-Probe Inc. 63 USPQ2d 1618,1624 (CA FC 2002)]

⁹ NOTE: this case was appealed [Tronzo v. Biomet (CA FC) 47 USPQ2d 1829]

The courts have also indicated the following:

"To be entitled to the filing date of a previously filed application, appellant's application on appeal would have to satisfy the requirements of 35 U.S.C. 120, among which is the requirement that the subject matter now claimed be disclosed in a manner prescribed by the first paragraph of section 112 in the prior application. Since, to conform to section 112, claimed subject matter must be described in the specification relied upon, subject matter which is first introduced in a continuation-in-part application is not entitled to the filing date of the parent application"

[In re van Langenhoven, 173 USPQ 426 (CCPA 1972)]

"[The] bottom line is that, no matter what term is used to describe a continuing application, that application is entitled to the benefit of the filing date of an earlier application only as to common subject matter"
[Transco Products Inc. v. Performance Contracting Inc. (CA FC) 32 USPQ2d 1077)].

"In terms of the statute, 35 U.S.C. 120, this means that, for an application to be entitled to the benefit of the date of a previously filed, copending application such application must contain a written description of the invention claimed in the second application which complies with the first requirement of the first paragraph of 35 U.S.C 112 However, as we said in In re Lukack,, 'the invention claimed [in the later application] does not have to be described [in the parent] in *ipsis verbis* in order to satisfy the description requirement of 112' The question in cases in which the parent application does *not* contain language contained in the claims of the later application is whether the language which *is* contained in the parent application is the legal equivalent of the claim language, in the sense that the '*necessary and only reasonable* construction to be given the disclosure [in the parent application] by one skilled in the art' is the same as the construction which such person would give language in claims of the later application."
[WAGONER AND PROTZMAN v. BARGER AND HAGGERTY, 175 USPQ 85, 86 (CCPA 1972)].

"It must be understood that the introduction of a new best mode disclosure would constitute the injection of 'new matter' into the application and automatically deprive the applicant of the benefit of the earlier filing date of the parent or original application for any claim whose validity rests on the new mode disclosure"

[Transco Products Inc. v. Performance Contracting Inc. (CA FC) 32 USPQ2d 1077, 1083]]

In Vas-Cath Inc. v. Mahurkar (CA FC) 19 USPQ2d 1111, 1114, it was noted that one might be inclined to question the purpose of a separate written description requirement of section 112 in view that "the invention" is in fact the subject matter that is defined by the *claims* being considered:

"One may wonder what purpose a separate "written description" requirement serves, when the second paragraph of § 112 expressly requires that the applicant conclude his specification "with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention."

Reasons for having the separate descriptive requirement, as noted in In Vas-Cath Inc. v. Mahurkar (CA FC) 19 USPQ2d 1111, 1115, included the following:

1) An adequate written description of the invention provides a "warning an innocent purchaser, or other person using a machine, of his infringement of the patent;

and at the same time taking from the inventor the means of practicing upon the credulity or fears of other persons, by pretending that his invention is more than what it really is, or different from its ostensible objects, that the patentee is required to distinguish his invention in his specification"; and

2) An adequate written description of the invention "guards against the inventor's overreaching by insisting that he recount his invention in such detail that his future claims can be determined to be encompassed within his original creation."

[Vas-Cath Inc. V. Mahurkar (CA FC) 19 USPQ2d 1115]

"The purpose of the 'written description' requirement is broader than to merely explain how to 'make and use'; the applicant must also convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of *the invention*. The invention is, for purposes of the 'written description' inquiry, whatever is now claimed" [Vas-Cath Inc. V. Mahurkar (CA FC) 19 USPQ2d 1117].

"Lockwood argues that the district court erred by looking solely at the applications themselves. We do not agree. It is the disclosures of the applications that count. Entitlement to a filing date does not extend to subject matter which is not disclosed, but would be obvious over what

is expressly disclosed. It extends only to that which is disclosed"
(emphasis added)

[Lockwood v. American Airlines Inc. (CA FC) 41 USPQ2d 1961, 1966]

"Lockwood argues that all that is necessary to satisfy the descriptive requirement is to show that one is 'in possession' of the invention. Lockwood accurately states the testbut fails to state how it is satisfied. One shows that one is 'in possession' of *the invention* by describing *the invention*, with all its claimed limitations, not that which makes it obvious. *Id.* ('[T]he applicant must also convey to those skilled in the art that, as of the filing date sought, he or she was in possession of *the invention* . The invention is, for purposes of the 'written description inquiry' whatever is now claimed.').....One does that [i.e. describes *the invention*] by such descriptive means as words, structures, figures, diagrams, formulas, etc., that fully set forth the invention. Although the exact terms need not be used in haec verba,the specification must contain an equivalent description of the claimed subject matter. A description which renders obvious the invention for which an earlier filing date is sought is not sufficient"

[Lockwood v. American Airlines Inc. (CA FC) 41 USPQ2d 1961, 1966]

"Thus the earlier application must meet the written description requirement of Section 112. The test for sufficiency of the written description is the same, whether for a design or utility patent. This test has been expressed in various ways; for example, 'whether the disclosure of the application 'reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter'.....*When the earlier disclosure is less than clear on its face, courts have explained that the prior application must necessarily have described the later claimed subject matter*"
(emphasis added)

[In re Daniels (CA FC) 46 USPQ2d 1790]

"It is insufficient as written description, for purposes of establishing priority of invention, to provide a specification that does not unambiguously describe all limitations of the count"

[Hyatt v. Boone (CA FC) 47 USPQ2d 1128]

"Entitlement to a filing date does not extend to subject matter which is not disclosed, but would be obvious over what is expressly disclosed. It extends only to that which is disclosed. While the meaning of terms, phases, or diagrams in a disclosure is to be explained or interpreted

from the vantage point of one skilled in the art, all limitations must appear in the specification. The question is not whether a claimed invention is an obvious variant of that which is disclosed in the specification. Rather, a prior application itself must describe an invention, and do so in sufficient detail that one skilled in the art can clearly conclude that the inventor invented the claimed invention as of the filing date sought"

[Lockwood v. American Airlines Inc. (CA FC) 41 USPQ2d 1961, 1966]

7) The original specification of the instant application is the same as the specification of applicants' 1987 parent CIP application. Thus, to establish a 1987 priority date for that which is currently claimed under section 120, applicants need only establish the fact that there was adequate section 112-1 support in the instant 1987 CIP disclosure for *the invention* that is now claimed. However, the same is not true of the alleged 1981 priority date. Specifically, the 1987 CIP specification is not the same as the 1981 specification nor has the 1981 specification been incorporated into the 1987 CIP in any immediately discernible fashion. The mere fact that the 1987 CIP application specifically identifies itself as being a CIP application of one having the 1981 specification, is not sufficient to incorporate any part of the 1981 specification thereto. The 1981 specification itself has therefor been left behind in the drafting and filing of the 1987 CIP. What this means in term of priority under section 120, is that the currently pending claims are only entitled to the 1981 priority date if it can be determined that they recite an invention that was not only described in the instant 1987 specification, but that was also described 1981 parent specification.

"Applicant is confusing two distinctly different things:

(1) the right to have benefit of the filing date of an earlier application under § 120 for subject matter claimed in the later application because that subject matter is *disclosed in an earlier application* to which a 'specific reference' is made - i.e., a reference to the earlier application per se, and

(2) the incorporation *by reference* in an application of matter elsewhere written down (not necessarily in a patent application), for economy, amplification, or clarity of exposition, by means of an incorporating statement clearly identifying the subject matter which is incorporated and where it is to be found"

[In re DE SEVERERSKY, 177 USPQ 146 (CCPA 1973)]

"Statement in application that it is 'continuation-in-part' of prior application is insufficient to incorporate therein any part of prior

application; all that it means is that insofar as disclosure of application finds corresponding disclosure in prior application, the application is entitled to filing date of prior application"

[In re DE SEVERERSKY, 177 USPQ 144 (CCPA 1973)]

"All it means insofar as the *disclosure of the parent* finds corresponding disclosure in the grand parent, the parent is entitled to the filing date of the grand parent. 35 U.S.C. 120"

[In re DE SEVERERSKY, 177 USPQ 146 (CCPA 1973)]

"Section 120 merely provides mechanism whereby application becomes entitled to benefit of filing date of earlier application disclosing same subject matter; common subject matter must be disclosed in both applications, either specifically or by express incorporation by reference of prior disclosed subject matter; nothing in Section 120 itself operates to carry forward earlier application; it contains no magical disclosure -- augmenting powers able to pierce new matter barriers; therefor, it cannot "limit" absolute and express prohibitions against new matter contained in Section 251."

[Dart Industries, Inc. v. Banner, Commissioner of Patents and Trademarks, (CA DC), 207 USPQ 273]

More specifically, because the 1981 specification was discarded in the drafting of the 1987 CIP, applicants' currently pending amended claims would only be entitled to the 1981 priority date if applicant's can show/prove that they are directed to an invention that was described in both the 1987 and 1981 specifications; i.e. the claimed invention must be shown to comprise "common subject matter". Being such, if a currently pending claim is necessarily directed to so much as a *smudge* of "new matter"¹⁰, i.e. subject matter introduced via the filing of the 1987 CIP specification, said claim is not entitled to the 1981 priority date:

"Unlike the enablement provision of section 112, where the disclosure of a single species might be sufficient to enable a practitioner skilled in the art to make and use any member of the genus,....., the written description requirement of section 112 requires more. See *Vas - Cath, supra*. This strict reading of the written description requirement prevents an inventor from surreptitiously expanding a patent through successive continuation-in-parts. See *id.* At 1562. Essentially, it limits

¹⁰ Wherein "new matter" is, by definition, "matter involving a departure from or in addition to the original disclosure" [37 C.F.R. 1.118]

the claims of an applicant to those inventions he clearly discloses, either expressly or inherently" (emphasis added)

[Tronzo v. Biomet Inc. (DC SFla) 41 USPQ2d 1403 ¹¹ citing Vas-Cath Inc. v. Mahurkar (CA FC) 19 USPQ2d 1111]

"To be entitled to the filing date of a previously filed application, appellant's application on appeal would have to satisfy the requirements of 35 U.S.C. 120, among which is the requirement that the subject matter now claimed be disclosed in a manner prescribed by the first paragraph of section 112 in the prior application. Since, to conform to section 112, claimed subject matter must be described in the specification relied upon, subject matter which is first introduced in a continuation-in-part application is not entitled to the filing date of the parent application"

[In re van Langenhoven, 173 USPQ 426 (CCPA 1972)]

"A continuation-in-part application is not entitled to the benefit of the earlier filing date of its parent application where the changes included within subsequent applications are 'new matter' which either alters the substance of the invention or makes the composition an invention for the first time, as opposed to the situation in which the subsequent application merely contains either a language change not effecting the meaning of the prior application or a specification which narrows the scope of that which was previously claimed. [Indiana General Corp. v. Krystinel Corp., 161 USPQ 82, 94-95]

"However, as mentioned earlier, a continuing application is entitled to rely on the earlier filing date of an earlier application only with respect to subject matter common to both applications" (emphasis added)

[In *Transco Products, Inc., v. Performance Contracting, Inc.*, 32 USPQ2d 1077 [**18]]

"Any claim in a continuation-in-part application that is directed solely to subject matter adequately disclosed under 35 U.S.C. 112 in the parent application is entitled to the filing date of the parent application."

[In *Transco Products, Inc., v. Performance Contracting, Inc.*, 32 USPQ2d 1077 [**18]]

"Assuming the common inventorship, copendency, and cross-reference required by section 120, that section further requires only that the invention be disclosed in the parent application in such manner as to

¹¹ NOTE: this case was appealed [Tronzo v. Biomet (CA FC) 47 USPQ2d 1829]

comply with the first paragraph of section 112 and be the same invention as that disclosed in the later application." (emphasis added)
[Kirschner, 305 F.2d 897 (C.C.PA1962)]

"Lockwood argues that all that is necessary to satisfy the descriptive requirement is to show that one is 'in possession' of the invention. Lockwood accurately states the testbut fails to state how it is satisfied. One shows that one is 'in possession' of the invention by describing the invention, with all its claimed limitations, not that which makes it obvious. *Id.* ('[T]he applicant must also convey to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention . The invention is, for purposes of the 'written description inquiry' whatever is now claimed.One does that [i.e. describes the invention] by such descriptive means as words, structures, figures, diagrams, formulas, etc., that fully set forth the invention. Although the exact terms need not be used in haec verba,the specification must contain an equivalent description of the claimed subject matter. A description which renders obvious the invention for which an earlier filing date is sought is not sufficient"
[Lockwood v. American Airlines Inc. (CA FC) 41 USPQ2d 1961, 1966]

"Lockwood argues that the district court erred by looking solely at the applications themselves. We do not agree. It is the disclosures of the applications that count. Entitlement to a filing date does not extend to subject matter which is not disclosed, but would be obvious over what is expressly disclosed. It extends only to that which is disclosed"
(emphasis added)
[Lockwood v. American Airlines Inc. (CA FC) 41 USPQ2d 1961, 1966]

8) Applicants' position pertaining to the requirements of Section 120 priority does not appear to make sense. Specifically, applicants' position, if accepted, means that a significant advantage is bestowed on inventors who are willing to file CIP applications. Namely, in such a world, an inventor can describe and claim invention B in a later filed CIP application, and yet obtain the earlier filing date of a different invention A that was described in an earlier filed parent application for invention B, simply by drafting quasi-generic claims in the CIP application having limitations that are "anticipated" by the descriptions of invention A in the parent application. Clearly, the purpose of Section 120 was to allow an applicant to file a later "continuing" application while **preserving** the earlier filing date of the parent application for that subject matter, and only that subject matter, that was disclosed in the earlier filed parent. The purpose of Section 120 was not to provide filers of CIP applications advantages over non-filers of CIP applications;

i.e. such as the right to an earlier filing date for a later filed invention via creative claim construction. To the contrary, as has been addressed above, Section 112-1 was specifically incorporated into Section 120 for the purpose of ensuring that filers of CIP applications were not bestowed with such “advantages”.

“In 1967, the Court of Custom and Patent Appeals first separated a new written description (WD) requirement from the enablement requirement of [Section] 112. The reason for this new judge-made doctrine needs some explanation. Every patent system must have some provision to prevent applicants from using the amendment process to update their disclosures (claims or specification) during their pendency before the patent office. Otherwise applicants could add new matter to their disclosures and date them back to their original filing date, thus defeating accurate accounting of the priority of invention.”

[Enzo Biochem Inc. v. Gen-Probe Inc. 63 USPQ2d 1618,1624 (CA FC 2002)]

9) The courts have made it clear that, under section 120, the subject matter described and claimed in a CIP application does not have to be described the same way in a parent application to be entitled to the filing date of the parent application; e.g.

“A continuation-in-part application, by definition, contains a substantial portion or all of the earlier application plus additional, previously undisclosed subject matter. A mere embellishment, or technical improvement, of features disclosed in the original application, which does not contribute to its novelty, utility, or non-obviousness, does not deprive a continuation application of its validity, or a patentee of the original filing date of the parent application”

[Acme Highway Products Corporation v. The D.S. Brown Company et al., (CA 6) 167 USPQ 129 at 134]

“New matter is not introduced by amendments, continuation applications or CIPs which merely clarify or make definite that which was expressly or inherently disclosed in the parent application or which conform the specification to matter originally disclosed in the drawings or claims”

[Stearn v. Superior Distributing Company et al., (CA 6), 215 USPA 1089 at 1094]

However, the courts have also made it clear that simply because an application purports to be a “continuation” or “CIP” application does not mean that it is a true continuation or true CIP application. Namely, to be a “*true continuation*”

application, the application must in fact disclose and claim subject matter previously disclosed in the parent application; e.g.

“Thus, if an application is, in fact, a true continuation application, it is entitled to the filing date of the original parent application. If, however, it discloses and claims subject matter not common to or not supported by the parent application, it is not a true continuation application and any claims therein that include new matter are only entitled to the actual filing date of the later-filed application, and not the earlier parent application”

[Reynolds Metals Company v. The Continental Group, Inc., (DC NIII), 210 USPQ 911 at 929]

The more one compares applicants' 1987 subject matter, i.e. that is disclosed and claimed with respect to the instant 1987 CIP specification, with applicants' 1981 subject matter that was described in the now discarded 1981 parent specification, the more one becomes aware of the differences and inconsistencies that exist between these two disclosures [e.g. note appendix II of this Office action]. These differences and inconsistencies occur at all levels of the CIP disclosure and go far beyond those which merely clarify or make definite the 1981 subject matter previously described in the now discarded 1981 parent specification. In fact, the 1987 systems/methods described in the 557 pages of the 1987 CIP specification appear to be so completely “expanded”, “enhanced”, and “improved” relative to those of the discarded 1981 parent specification that it not only seems reasonable to question whether or not the instant 1987 is a “true continuation” of the 1981 parent, but it seem necessary to question it. Proving their allegations of priority under section 120 to an earlier 1981 filing date is, after all, applicants' burden.

“A party who, like Hiraga, relies on an earlier-filed application under 35 U.S.C. 119 or 120 has the burden to show that the foreign or patent application supports later-added claims under 35 U.S.C. 112-1”
[Utter v. Hiraga 6 USPQ 2d 1709, 1713 (Fed. Cir. 1988)]

This burden is not met by citing diverse 1981 and 1987 disclosures from the respective 1981 and 1987 CIP specifications that arguably “anticipate” all of a given claim's limitations in respectively different 1981 and 1987 ways (as applicant has alleged throughout the record). To the contrary, a proper Section 120 inquiry demands that the respective 1987 and 1981 teachings be relied upon to establish section 120 priority be compared to determine if they truly represent “common subject matter” required for priority under section 120.

“The inquiry required by section 120 demands a comparison not only of the claims of the parent and continuation-in-part application, but also of any other disclosures made in the applications” [Acme Highway Products Corporation v. The D.S. Brown Company et al., (CA 6), 167 USPQ 129 at 133]

B. It is believed that Applicants' have improperly dismissed, as irrelevant, the significant differences and inconsistencies that clearly exist between the written description that is provided in the 557 pages of the instant 1987 CIP specification and the written description provided in the 44 pages of the past 1981 parent specification (i.e. as they pertain to the issue of priority under section 120):

1) Applicant alleges that the issue of Section 120 priority pertains only to that which is claimed. Namely, applicants contend that:

- a) The examiner should first give each of applicants' currently pending amended claims its "broadest reasonable interpretation";
- b) Next, the examiner should determine if this "broadest reasonable interpretation" allows the claim to be "supported" (e.g. in sense of "anticipation" under Section 102) by subject matter found somewhere in the 557 pages of the instant 1987 CIP specification;
- c) Then, that the examiner should determine if this "broadest reasonable interpretation" also allows this same claim to be "supported" (e.g. in sense of "anticipation" under Section 102) by subject matter found in the past 1981 parent specification; and
- d) If the answer to steps "b" and "c" is yes, then applicants contend that the claims are entitled to the 1981 filing date of the parent application irrespective of the many noted difference that exist between the 1987 and 1981 written description that have been relied upon; i.e. differences/conflicts that the current examiner has cited throughout the present prosecution.

"[Section] 120 does not require an applicant to demonstrate that the disclosures relied upon under §120 have anything in common besides their ability to separately comply with §112-1 with respect to the claims for which priority is sought. Accordingly, the Examiner's focus on comparing the support from the two applications for similarity or common subject matter is improper and irrelevant because all applicants are required to do is satisfy §120 is show that each disclosure meets the requirements of §112-1 for a given claim." (emphasis added)

[Page 141 of applicant's response filed on 1/28/2002 in application S.N. 08/470,571]

"Accordingly, the law requires a two part test in which the applicant separately demonstrates § 112 support for each application. In the FOA, the examiner distorts this straightforward test by imposing a third element of the test

whereby the § 112 support from each application consists of 'common subject matter.'"

[see the last 10 lines on page 137 of the response filed on 1/28/2002 in SN 08/470,571].

However, as noted above, Applicants appear to have confused the requirement of "anticipation" under section 102 with requirements of "adequate written description" under section 112-1 as incorporated within Section 120.

2) As has been set forth in "Section I" of the Office action mailed 7/17/2002 in SN 08/470,571, the 1987 subject matter that is described in the 557 pages of the instant CIP specification is vastly different from and inconsistent with the 1981 subject matter that was previously described in the 44 pages of applicants' past 1981 parent specification. By applicants' own admissions, the inventions described in the 44 pages of his 1981 specification have been **expanded** by the description that is contained in the 557 pages of the instant 1987 specification so as to contain, at best, "many improvements and enhancements":

"Certainly, I made an effort early on to determine whether or not the disclosures of the '490 patent made their way into the '277 and although they're spread around and sometimes stated a little bit differently, for all relevant purposes of this hearing, the '490 patent is expanded by the '277. Its certainly not inconsistent." (emphasis added)

[Applicant counsel argument before the ITC (1997 ITC LEXIS 307, *252)]

"In fact, both [the 1981 and 1987] specifications describe the inventions disclosed in the 1981 specification, although the 1987 specification contains many enhancements and improvements."

[see the last two lines on page 9 of applicant's supplemental response filed 5/6/02 in SN 08/470,571]

Because only expanded descriptions containing "enhanced and improved" 1987 versions of the 1981 inventions exist within the instant 1987 CIP specification, when citing alleged section 112-1 support for the pending claims of the instant 1987 CIP disclosure, applicants' citations inevitably rely on "enhanced and improved" 1987 subject matter¹². Applicants contend that the fact that the current claims must derive "adequate written description" under Section 112-1 from such expanded 1987 descriptions is irrelevant to the Section 120 priority issue.

"The fact that the [section 112-1] support [that applicant] identified in the 1987 specification for a certain [claimed] features (or limitation)

¹² The examiner notes that this fact is blatantly obvious whenever applicant attempts to specifically show alleged dual section 112-1 support for each claim limitation of any given pending amended claim [e.g. as is exemplified via Appendix A of the amendment filed 6/7/2000 in 08/470,571]

also happens to include additional features or details relating to the same underlying feature (or limitation) disclosed in the 1981 specification , does not mean that both specifications do not support the feature or limitation with similar and valid 'common subject matter' support.”¹³

[lines 5-8 on page 10 of the supplemental response]

To the contrary, it seems that preventing an applicant from relying on such expanded written descriptions in a later CIP application, one in which claims priority to an earlier filed parent application not having such expanded descriptions is sought, is precisely why the written description requirement of Section 112-1 was incorporated within Section 120 in the first place.

“Unlike the enablement provision of section 112, where the disclosure of a single species might be sufficient to enable a practitioner skilled in the art to make and use any member of the genus,....., the written description requirement of section 112 requires more. See Vas - Cath, supra. This strict reading of the written description requirement prevents an inventor from surreptitiously expanding a patent through successive continuation-in-parts. See id. At 1562. Essentially, it limits the claims of an applicant to those inventions he clearly discloses, either expressly or inherently” (emphasis added)

[Tronzo v. Biomet Inc. (DC SFla) 41 USPQ2d 1403¹⁴ citing Vas-Cath Inc. v. Mahurkar (CA FC) 19 USPQ2d 1111]

“A continuation-in-part application is not entitled to the benefit of the earlier filing date of its parent application where the changes included within subsequent applications are ‘new matter’ which either alters the substance of the invention or makes the composition an invention for the first time, as opposed to the situation in which the subsequent application merely contains either a language change not effecting the meaning of the prior application or a specification which narrows the scope of that which was previously claimed. [Indiana General Corp. v. Krystinel Corp., 161 USPQ 82, 94-95]

“In 1967, the Court of Custom and Patent Appeals first separated a new written description (WD) requirement from the enablement requirement of [Section] 112. The reason for this new judge-made doctrine needs some explanation. Every patent system must have some provision to prevent applicants from using the amendment process to update their

¹³ Throughout the prosecution history, applicant has maintained that “common subject matter” is not a real/actual requirement of section 120 but is instead a requirement that the examiner himself has created and imposed on the current applicant. It is not clear whether this quote reflects a departure from applicant's past positions (?)

¹⁴ NOTE: this case was appealed [Tronzo v. Biomet (CA FC) 47 USPQ2d 1829]

disclosures (claims or specification) during their pendency before the patent office. Otherwise applicants could add new matter to their disclosures and date them back to their original filing date, thus defeating accurate accounting of the priority of invention."

[Enzo Biochem Inc. v. Gen-Probe Inc. 63 USPQ2d 1618,1624 (CA FC 2002)]

After all, the written description requirement of Section 112-1 requires an applicant to provide a written description of *the invention* within his specification, i.e. to describe that which is claimed, in order put the public on notice as to exactly what it is that applicant has invented.

An adequate written description of the invention "guards against the inventor's overreaching by insisting that he recount his invention in such detail that his future claims can be determined to be encompassed within his original creation."

[Vas-Cath Inc. V. Mahurkar (CA FC) 19 USPQ2d 1115]

Thus, when considering the adequate written description requirement of Section 112-1 that has been incorporated into Section 120, one actually considers/compares the respective disclosures themselves to determine whether *the invention* as described in the instant CIP specification was also described in the parent specification.

"The inquiry required by section 120 demands a comparison of 1) the claims of the parent and CIP applications and 2) any other disclosures made in the applications such as specification and drawing. Acme Highway, supra, at 1079, 167,USPQ at 132-33."

[Stern v. Superior Distributing Company et al., (CA 6), 215 USPQ 1089 at 1094]

"Lockwood argues that the district court erred by looking solely at the applications themselves. We do not agree. It is the disclosures of the applications that count. Entitlement to a filing date does not extend to subject matter which is not disclosed, but would be obvious over what is expressly disclosed. It extends only to that which is disclosed" (emphasis added)

[Lockwood v. American Airlines Inc. (CA FC) 41 USPQ2d 1961, 1966]

Only if the respective written descriptions from the respective disclosures, i.e. those which are relied upon to describe "the invention", are the same or equivalent is the section 112-1 requirement of section 120 met; e.g. the respective written descriptions must define "common subject matter".

"However, as mentioned earlier, a continuing application is entitled to rely on the earlier filing date of an earlier application only with respect to subject matter common to both applications" (emphasis added)

[In *Transco Products, Inc., v. Performance Contracting, Inc.*, 32 USPQ2d 1077 (**18)]

Being such, the differences and inconsistencies that exist between the 1987 and 1981 written descriptions being relied upon by applicant to allegedly support the claims cannot be simply dismissed as being irrelevant to the Section 120 priority issue as applicants wish, hope, and most likely need. That is because these differences define different subject matter and therefor describe different inventions (i.e. by applicants' own admission, that which is described by the 1987 written description has clearly being "expanded" when compared to that which was described in the 1981 written description).

Clearly, to obtain priority under section 120, the written description of the instant 1987 CIP specification must describe *the invention* that is being claimed, and the written description of the 1981 parent specification must describe *this same invention*. And, contrary to applicants assertions, the only way that this can be determined is by comparing the respective 1987 and 1981 descriptions/disclosures themselves (e.g. for the presence of common subject matter).

"The inquiry required by section 120 demands a comparison of 1) the claims of the parent and CIP applications and 2) any other disclosures made in the applications such as specification and drawing. *Acme Highway, supra*, at 1079, 167, USPQ at 132-33."

[*Stern v. Superior Distributing Company et al.*, (CA 6), 215 USPQ 1089 at 1094]

3) As noted above, due to the complexity of the Section 120 priority issue that has been created by the way in which applicants have elected to draft their 1987 CIP specification and pending claims, the burden of establishing priority under Section 120 is a daunting task. It is fortunate for the examiner/Office that the burden of showing and establishing section 120 priority falls on applicants:

"A party who, like Hiraga, relies on an earlier-filed application under 35 U.S.C. 119 or 120 has the burden to show that the foreign or patent application supports later-added claims under 35 U.S.C. 112-1"

[*Utter v. Hiraga* 6 USPQ 2d 1709, 1713 (Fed. Cir. 1988)]

In light of all the ambiguities that have been shown to exist between applicants' 1987 and 1981 written descriptions, applicants' allegations of priority to the 1981 filing date for that which is claimed, when made, will not be accepted until such time that applicant shows that the claim(s) in question fulfill the actual requirement of Section 120; the examiner has not (and will not) accept the "anticipation" standard of alleged claim support which applicants have (and continue) to rely upon improperly [SEE section II of this Office action].

4) Before the ITC, applicants' own counsel seems to have alleged that he was "unaware of any significant differences" between the specification of applicant 1987 CIP application and the specification of applicant' 1981 parent application.

"To the extent -- and I'm unaware of any significant differences between the '490 patent [the 44 pages of applicants' past 1981 Parent specification] and the '277 patent [the 557 pages of applicants' instant 1987 CIP specification]. I haven't seen one, and I don't remember it. Certainly, I made an effort early on to determine whether or not the disclosures of the '490 patent made their way into the '277 and although they're spread around and sometimes stated a little bit differently, for all relevant purposes of this hearing, the '490 patent is expanded by the '277. Its certainly not inconsistent."

[Applicant counsel argument before the ITC (1997 ITC LEXIS 307, *252)]

Administrative Law Judge Luckern responded to this allegation by pointing out that there was at least one very "significant difference" between applicant's 1987 and 1981 specifications -- namely, the fact that the 557 page of applicants instant 1987 CIP specification was more than 500 pages longer than the 44 pages of applicants' 1981 parent specification.

"There is at least one significant difference in the specifications of the '490 [the 44 pages of the past 1981 Parent specification] and '277 [the 557 pages of the present 1987 CIP specification] patents, viz. the fact that the '277 specification is more than ten times the length of the '490 specification. More over, assuming no inconsistencies between the two specifications, it is indisputable that the '277 specification contains a significant amount of material that was added to the disclosure of the '490 specification in 1987 (i.e. over 500 pages of text)."

[Administrative Law Judge Luckern's response to the applicant counsel testimony (1997 ITC LEXIS 307, *252)]

However, the number of pages added by the 1987 CIP goes far beyond the 500 pages cited by Judge Luckern in light that the 500 page calculation assumes that the 44 page text from the 1981 specification had in fact been carried forward into the specification of the 1987 CIP. Such an assumption is clearly erroneous as is evident by applicants' counsels' allegation:

"Certainly, I made an effort early on to determine whether or not the disclosures of the '490 patent made their way into the '277 and although they're spread around and sometimes stated a little bit differently, for all relevant purposes of this hearing, the '490 patent is expanded by the '277. Its certainly not inconsistent."

[Applicant counsel argument before the ITC (1997 ITC LEXIS 307, *252)]

Within this statement, it is unclear as to exactly what applicants' counsel meant by "inconsistent". Namely, it seems to be an undisputable fact that the 1987 systems and methods which are described in the 1987 CIP are "inconsistent" with respect to the systems and methods that were previously described in the 1981 specification to the extent that the 1987 systems/methods clearly represent "expanded", "enhanced", and "improved" versions of the system/method that were described in the 1981 parent.

"Certainly, I made an effort early on to determine whether or not the disclosures of the '490 patent made their way into the '277 and although they're spread around and sometimes stated a little bit differently, for all relevant purposes of this hearing, the '490 patent is expanded by the '277. Its certainly not inconsistent." (emphasis added)

[Applicant counsel argument before the ITC (1997 ITC LEXIS 307, *252)]

"In fact, both [the 1981 and 1987] specifications describe the inventions disclosed in the 1981 specification, although the 1987 specification contains many enhancements and improvements." (emphasis added)

[see the last two lines on page 9 of applicant's supplemental response filed 5/6/02 in SN 08/470,571]

However, preventing "expansion"/"enhancements"/"improvements" of disclosed/claimed subject matter via the filing of one or more such CIP applications is precisely why the written description requirement of section 112-1 was into section 120 in the first place.

"Unlike the enablement provision of section 112, where the disclosure of a single species might be sufficient to enable a practitioner skilled in the art to make and use any member of the genus,,,,,,,,,,,,, the written description requirement of section 112 requires more. See Vas - Cath, supra. This strict reading of the written description requirement prevents an inventor from surreptitiously expanding a patent through

successive continuation-in-parts. See id. At 1562. Essentially, it limits the claims of an applicant to those inventions he clearly discloses, either expressly or inherently" (emphasis added)

[Tronzo v. Biomet Inc. (DC SFla) 41 USPQ2d 1403 ¹⁵ citing Vas-Cath Inc. v. Mahurkar (CA FC) 19 USPQ2d 1111]

"A continuation-in-part application is not entitled to the benefit of the earlier filing date of its parent application where the changes included within subsequent applications are 'new matter' which either alters the substance of the invention or makes the composition an invention for the first time, as opposed to the situation in which the subsequent application merely contains either a language change not effecting the meaning of the prior application or a specification which narrows the scope of that which was previously claimed. [Indiana General Corp. v. Krystinel Corp., 161 USPQ 82, 94-95]

"Section 120 merely provides mechanism whereby application becomes entitled to benefit of filing date of earlier application disclosing same subject matter; common subject matter must be disclosed in both applications, either specifically or by express incorporation by reference of prior disclosed subject matter; nothing in Section 120 itself operates to carry forward earlier application; it contains no magical disclosure -- augmenting powers able to pierce new matter barriers; therefor, it cannot "limit" absolute and express prohibitions against new matter contained in Section 251."

[Dart Industries, Inc. v. Banner, Commissioner of Patents and Trademarks, (CA DC), 207 USPQ 273]

"In 1967, the Court of Custom and Patent Appeals first separated a new written description (WD) requirement from the enablement requirement of [Section] 112. The reason for this new judge-made doctrine needs some explanation. Every patent system must have some provision to prevent applicants from using the amendment process to update their disclosures (claims or specification) during their pendency before the patent office. Otherwise applicants could add new mater to their disclosures and date them back to their original filing date, thus defeating accurate accounting of the priority of invention."

[Enzo Biochem Inc. v. Gen-Probe Inc. 63 USPQ2d 1618,1624 (CA FC 2002)]

Specifically, despite applicants counsel's allegation, the 557 pages of new text that is the 1987 CIP disclosure are full of *"inconsistencies"* with respect to the 44 page written description of the 1981 parent application - at least to the extent that

¹⁵ NOTE: this case was appealed [Tronzo v. Biomet (CA FC) 47 USPQ2d 1829]

the new disclosure that is the 1987 CIP specification significantly alters the substance of the systems/methods that were described in 1981 parent application (i.e. which is, by definition, "new matter"). That is, the "new" descriptions provided by 1987 CIP are in no way limited to changes in language that do not effect the meaning of that which was described the prior 1981 parent! Namely, when referenced back to the written description of the 1981 parent, the written description of the 1987 CIP effected nothing less than:

- 1) "Expanding" (i.e. changes and broadened) the way in which various terminologies were define and used (e.g. "programming", "words", etc, ...);
- 2) Changes in the way the "illustrated" structures were configured and operated;
- 3) Changed/Upgraded in the signaling transport technology on which all of the described methods/systems of the 1987 CIP disclosure were based (1987 SPAM packets v. 1981 trigger/cuing "words");
- 4) "Expanded" (i.e. changes and broadened) the types of signaling that was conveyed as "instruct" and "control" signals (e.g. provided by the added ability of the 1987 SPAM packets to carry/download computer software);
- 5) "Expanded" (i.e. changed and broadened) the described environments to which the described methods/systems were applied (e.g. the 1987 descriptions no longer being confined to TV/Radio distribution applications);
- 6) Etc,....

Some of the more noteworthy of these differences and "inconsistencies" are addressed in Appendix I and Appendix IV of this Office action.

XXX

APPENDIX III: (SOME NOTEWORTHY DIFFERENCES)

NOTEWORTHY DIFFERENCES AND INCONSISTENCIES BETWEEN
APPLICANT 1981 AND 1987 CIP SPECIFICATIONS:

1) On page 149 of the response filed 1/28/2002 in SN 08/470,571, applicants appear to have acknowledged the fact that the same "programming" terminology was defined differently within the respective 1981 and the 1987 disclosures. Specifically:

a) The disclosure of the 1981 parent application, which was not carried forward into the instant 1987 CIP disclosure, defined the "programming" terminology to mean:

"Everything that is transmitted over television or radio intended for communication of entertainment or to instruct or inform"; whereas

b) The instant 1987 CIP disclosure defined this same "programming" term to mean:

"Everything that is transmitted electronically to entertain, instruct, or inform including television, radio, broadcast print, computer programming, as well as combined medium programming".

Amazingly, in this response, applicants allege that the meaning that is respectively imparted to the same "Programming" terminology by these different definitions is the same. In fact, applicant alleges that the only difference that exists between the 1981 and 1987 "programming" definitions are ones that the instant examiner created [see page 149 of the response filed 1/28/2002 in SN 08/470,571]. Nonsense!

Clearly, the 1981 definition defines the "programming" terminology as being Radio and TV transmissions, while the 1987 disclosure *expands* the definition be "everything that is transmitted electronically."¹⁶ And, contrary to applicants' accusation, the instant examiner was not present and played no part in creating or incorporating these vastly different 1981 and 1987 "programming" definitions into applicants' respective 1981 and 1987 disclosures.

¹⁶ In fact, the 1987 definition not only expands the "programming" terminology to mean "everything transmitted electronically", but this 1987 expanded "programming" definition explicitly adds "computer programming", "broadcast print", and "combined medium programming" to the "television and radio transmissions" which made up the 1981 "programming" definition.

While applicants can avoid using the “programming” terminology itself in the currently pending amended claims, the “expanded” 1987 definition of the “programming” terminology nonetheless continues to impart its *expanded* meaning onto all of the 1987 disclosures in the CIP specification that are based on this expanded 1987 “programming” definition. And thus, in a like manner, these expanded 1987 descriptions continue to associate expanded 1987 scope/meaning with the limitations of the currently pending amended claims which necessarily derive required section 112 support from such 1987 CIP disclosures. And being that the “programming” terminology does not constitute “common subject matter” between 1981 and 1987 disclosures, as is evident from its vastly different 1987 and 1981 definitions themselves, this too refutes applicants current claim to the 1981 date.

As is evidenced above, the instant 1987 disclosure explicitly defines and uses the “programming” terminology in a way that is vastly different both in scope and meaning from the way that this the same “programming” terminology was previously defined and used within the disclosure of the 1981 parent

This evidences the fact that one cannot assume that the terminology shared by the respective 1981 and 1987 disclosure is indicative of “common subject matter.”

2) The embedded “instruct signals” of applicants’ 1987 specification comprised computer software/programming whereas the embedded “instruct signals” of applicants 1981 specification did not comprise computer software/programming:

This too evidences the fact that one cannot assume that the terminology shared by the respective 1981 and 1987 disclosure is indicative of “common subject matter.”

3) While the “inconsistent” use/scope/meaning of the “programming” and “instruct signal” terminology between 1987 and 1981 applications is self-evident, the inconsistent use of other shared terminology is less conspicuous. The term “signal word” represents but just one example of the more subtle inconsistencies that exist between the 1981 and the 1987 disclosures.

The 1981 inventions of the 1981 specification were described as having distributed discrete digital information, in the form of “signal units”, from a transmitter site to a plurality of receiver as ancillary data embedded within TV and Radio transmissions. To transmit these “signal units”, the bits from one or

more of the "signal units" were organized into one or more discrete strings of bits. Each of these discrete bit strings was then embedded, at a respective discrete time and/or location, within the transmitted TV or radio programming as a "signal word". Specifically, as defined and used within the 1981 specification, each "signal word" represented a respective occurrence/"appearance" of ancillary signaling within the distributed programming:

"The term 'signal word' hereinafter means one full discrete appearance of a signal as embedded at one of time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. Such strings may or may not have predetermined data bits to identify the beginnings and ends of words. Signal words may contain parts of signal units, whole signal units, or groups of partial and whole signal units or combinations" ¹⁷ [note lines 3-12 of column 3 in US Patent #4,694,490]

Although this 1981 definition of the "signal word" terminology was literally carried forward into the instant 1987, it was carried forward only in a "cosmetic" sense. For while the 1987 disclosure includes an allegation stating that the "signal word" terminology will be defined and used throughout the 1987 disclosure in the same way that it was defined and used in 1981 parent disclosure [see the last 10 lines on page 14 of the instant disclosure], as actually practiced in the 1987 specification, this allegation is untrue. To the contrary, in much to most (if not all) of the remaining portions of the instant 1987 CIP specification, the term "signal word" is not used for the so stated/coined purpose. Instead, the "signal word" terminology was used in a way that is, at best, inconsistent with its explicitly coined definition to its explicitly coined definition. Specifically, in the remaining portions of the 1987 disclosure, the term "signal word" was now used to refer to the N-bit bytes of "computer-type" data which made up the digital information that is now distributed and/or processed by the 1987 inventions [e.g. note: the last three lines on page 54 of the instant disclosure; lines 4-8 on page 56 of the instant disclosure; lines 9-13 on page 59 of the instant disclosure; etc, ...].

¹⁷ "The term 'signal units' hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a unique purchase order number identifying the prior use of a programming unit, or a general instruction identifying whether a programming unit is to be retransmitted immediately or recorded for delayed transmission." [note: lines 64-68 of column 2 and lines 1-3 of column 3 in US Patent #4,694,490; and lines 25-32 of the instant disclosure]

Namely, in the 1981 specification applicants executed their right to be their own lexicographer and gave the "signal word" terminology a meaning that was unique to applicants' 1981 disclosure. Initially, applicants' 1987 CIP specification indicates that this unique 1981 definition of "signal word" has been carried forward into the 1987 CIP specification. To the contrary, however, the use and meaning of the "signal word" terminology in the 1987 CIP specification was actually "enhanced"/"improved" so to refer instead, in a more conventional sense, to n-bit bytes/"words" of computer data. Thus, somewhat surreptitiously, the meaning/use of the "signal word" terminology has been changed via the filing of applicants' 1987 CIP specification; i.e. the term "signal word" does not constitute common subject matter.

In summary, "signal word" was explicitly defined, coined, and used throughout the discarded 1981 disclosure for the expressed purpose of referring to each occurrence/appearance of ancillary signaling within the distributed TV and radio programming. The instant 1987 CIP disclosure initially incorporates the 1981 "signal word" definition and also indicates/alleges that this 1981 "signal word" definition will be adopted throughout the 1987 CIP. However, this allegation is untrue and misleading because, in practice, the use/meaning of the "signal word" terminology is changed within the instant 1987 disclosure so as to refer to the "words"/bytes of digital computer-type data which comprised (and did not carry) said ancillary signaling; i.e. quite different from its use in the 1981 parent use/definition of this same terminology.

Thus, as with the "programming" terminology, the instant 1987 CIP disclosure's smeared use of explicitly coined "signal word" terminology does not represent "common subject matter" with respect to the disclosure of the 1981 parent and therefor this smeared use/misuse of this terminology is not entitled to the 1981 filing date for reasons addressed above. The smeared use of the "signal word" terminology:

This evidences the fact that even terminology that has been explicitly coined in both application for the same alleged purpose, is not always what it appears.

[ALSO, SEE "APPENDIX C" ATTACHED TO THE OFFICE MAILED 7/17/2002 IN 08/470,571]

D) As if the existing uncertainties as where section 112 support can be allegedly found were was not enough, it now seems that applicant has come to a realization that some/much/most of the features now being claimed with respect to the instant 1987 CIP disclosure were not "explicitly" disclosed in the past 1981 Parent specification. Because of this, applicant alleges that those features that are not explicitly present in the 1981 parent specification are, allegedly,

"inherently" present and/or "implicitly" present within the teachings of the past 1981 parent specification.

"To the contrary, the 1981 definition [of "programming"] implicitly includes, and the 1987 definition [of "programming"] explicitly includes, computer programming in the definition".

[lines 20-26 on page 17 of the supplemental response filed 5/6/2002 in 08/470,571]

"An applicant is entitled to priority for a claim that was inherently described in an earlier application and explicitly described in a later application"

[note the last 15 lines on page 140 of the response filed on 1/28/2002 in application SN 08/470,571].

With respect to applicants' allegations of "inherency":

a) It is noted that applicants cannot simply allege that subject matter is inherent in their 1981 parent specification, they must prove that it is inherent within the 1981 specification:

"If applicant's wish to rely on what inherently happens in examples taken from parent applications, as support for claimed subject matter which is clearly not specifically disclosed, they must prove their case; what they wrote into instant continuation in part application by way of interpretation and contention can avail them nothing."

[In re Ziegler, Breil, Holzkamp & Martin (CCPA) 156 USPQ 511]

This burden of "proof", however, simply adds to the existing burden of proof that has been caused by applicant's failure to incorporate the 1981 parent specification into the 1987 CIP. Namely, to establish section 120 priority, not only must applicants **prove** the inherency of the alleged inherent subject matter within the 1981 parent specification, but applicants must also prove/show that this inherent subject matter represents "common subject matter" with respect to that which is now being claimed via applicants' instant 1987 CIP specification given applicants' failure to incorporate the 1981 specification into that of the 1987 CIP; and

b) The implication of claimed subject matter being "inherently" embedded within teachings of the 1981 disclosure, e.g. and previously patented claims derived therefrom, is profound (e.g. especially as it pertains to the

issue of double patenting). Thus, it is respectfully requested that applicant now identify:

1. All of those features from the 1987 disclosure that are "inherently" contained within teachings of the 1981 parent disclosure; and
2. All of those teachings from the 1981 disclosure which "inherently" contain features that are now explicitly disclosed in the instant 1987 CIP specification

[especially when the issue of "inherent" features pertains to subject matter that is currently being claimed within the instant pending amended claims or to subject matter which has been claimed within previously patented claims].

5) In order to transmit a wider range of control and messaging information than was previously possible, and in order to transmit this wider range of control and messaging information more efficiently within "signal word"-like intervals of Radio/TV/"ALL OTHER" forms of electronic transmissions, applicants' instant 1987 CIP disclosure introduced a packetized data structure called "SPAM" (see figures 2E-2K of the instant disclosure). In applicants' 1987 "SPAM" environment, it was this "SPAM" packeting which carried an expanded range of "signal unit"-like information, and it was the "SPAM" packets themselves whose bits were organized into sequences so as to be transmitted within "signal word"-like intervals of TV/Radio/"ALL OTHER" forms of electronic transmission; e.g. the expression "-like" being appended here and above in order to emphasize the fact that the information carried within "SPAM" packeting, and the "strings" of bits derived from such "SPAM" packeting, are different from the 1981 "signal units" and 1981 "signal words" that were explicitly defined by the 1981 even though such terminology was carried forward, i.e. "cosmetically", into the 1987 disclosure [see part "2)" of part "S)" of this section]. The fact that this 1987 "SPAM" transport scheme was not disclosed within applicants' 1981 parent application *appears* to have been argued by applicants themselves during ITC Investigation No. 337-TA-392:

"Even more difficult to understand is PMC's assertion that the French chef example [in the '490 patent], and I am quoting from their brief, 'it says nothing about the recipe being sent in any type of SPAM signal'Technically, they're correct, because the term 'SPAM signal' was introduced in the '277 patent or the specification which led to the '277 patent [i.e. the instant 1987 CIP disclosure], and it doesn't appear in the '490 patent [i.e. the 1981 disclosure of the past parent] "
[1997 ITC Lexis 307,*254 (Part II)]

As it applies to the issue of section 120 priority, the examiner maintains that the applicant [PMC] was more than just "*technically correct*". Specifically, while both of applicants' 1981 and 1987 inventions operated to transmit digitally encoded ancillary signaling within TV/RADIO programming, only the 1987 inventions did so using the more sophisticated 1987 packetized "SPAM" transport technology that was first introduced via the instant disclosure as originally filed within the 1987 CIP. And because applicant submits that all of the recited auxiliary "signaling" of the currently pending claims derive their required Section 112-1 support from the more advanced 1987 "SPAM" technology of the instant 1987 CIP specification, applicant refutes his own claim to the 1981 date of the parent application for these claims being that the 1987 "SPAM" technology now being claimed was not disclosed or supported by the past 1981 parent specification. [NOTE: "APPENDIX A" of applicants' response filed 6/7/2000 in SN 08/470,571; and "APPENDIX C" of the Office action mailed 7/17/2002 in SN 08/470,571].

Because all of the currently pending amended claims appear to have at least one limitation whose meaning is defined by 1987 "SPAM" signaling (a fact that has been evident in all of the claim charts that applicant has submitted to date for the purpose of demonstrating 112-1 support), and because the "SPAM" signaling exists only in the instant 1987 disclosure, all of the currently pending amended claims seem (at best) only to be entitled to the 1987 filing date of the originally filed CIP application; e.g. none of the claims appear to be entitled to the 1981 priority date of the parent disclosure which did not describe "SPAM".

6) Applicant alleges that many/most/all of his pending claims derive required section 112 support from the "WALL STREET WEEK" embodiment that was described in the instant disclosure (wherein said instant disclosure was originally filed within a CIP application on 9/11/1987). During the present prosecution, applicant has alleged that these same pending claims are entitled to priority under Section 120 based on a similar "WALL STREET WEEK" embodiment that was described in the disclosure of the parent application filed 11/3/81. Since applicants' 1987 disclosure is different from applicants' 1981 disclosure, and since applicants' 1987 disclosure did not formally incorporate the 1981 disclosure into the 1987 disclosure physically or via an "*incorporation by reference*", the pending claims are only entitled to 1981 priority for "WALL STREET WEEK" subject matter that was common to both disclosures. While the "WALL STREET WEEK" embodiment that is described in applicants' 1987 disclosure and the "WALL STREET WEEK" embodiment that is described in applicants' 1981 disclosure have their similarities, the methods/structures used to carry out these two "WALL STREET WEEK" embodiments are quite different [see appendix I of this Office action]. The following is provided to further exemplify such differences:

a) It is noted that:

1) Applicants' 1987 disclosure references figure 1 of the 1987 disclosure as illustrating the receiver structure that was used to implement the 1987 "WALL STREET WEEK" embodiment [note the discussion which begins in line 21 on page 20 of applicant's 1987 disclosure]; and

2) Applicants' 1981 disclosure references figure 6c of the 1981 disclosure as illustrating the receiver structure that was used to implement the 1981 "WALL STREET WEEK" embodiment [note the discussion which begins on line 31 of column 19 of US Patent #4,694,490].

While these two figures use a common label "MICROCOMPUTER" and reference numeral "205" to identify one element of the respective structures, the respectively identified elements are clearly different in both structure and operation:

Showing that, as with applicants' use of common terminology, it would also be erroneous for one to assume that common labels and common reference numerals were used in applicants' 1981 and 1987 disclosures as an indication of common elements or "common subject matter".

The fact that commonly labeled elements in applicants 1981 and 1987 disclosures represent different structures/operations/scopes is evidenced in the following:

1) The "MICROCOMPUTER" (205) of applicants' 1987 disclosure actually comprised the circuitry required for overlaying locally generated graphics over the related/received TV signal broadcast. Whereas, in contrast, the "MICROCOMPUTER" (205) of applicants' 1981 disclosure did not comprise such circuitry but instead outputted locally generated graphics to the TV receiver so that they could be overlaid over a related/received TV signal broadcast;

2) the "MICROCOMPUTER" (205) of applicants' 1987 disclosure actually comprised the circuitry required for receiving, loading, and running downloaded computer *software* (i.e. the disclosed "program instruction set") which was used to control the

"MICROCOMPUTER"(205) of applicant's 1987 disclosure to execute functions defined by ones of later received discrete instructions. Whereas, in contrast, the "MICROCOMPUTER" (205) of applicants' 1981 disclosure was pre-programmed with computer software which was used to control the "MICROCOMPUTER"(205) of applicant 1981 disclosure to execute functions defined by ones of received discrete instructions;

b) In view of the differences in structure that is set forth in part a) of this paragraph, it is clear that the method used to overlay graphic images on a related/received TV signal broadcast in the 1987 "WALL STREET WEEK" embodiment is quite different from the method used to overlay graphic images on a related/received TV signal broadcast in the 1981 "WALL STREET WEEK" embodiment. Most notably, in the 1981 "WALL STREET WEEK" embodiment the overlay method was performed by cuing a microcomputer with instructions signals (e.g. with some unspecified type of cuing signals) which caused the microcomputer to execute ones of locally stored software instructions which were required to generate, output, and overlay locally generated graphics onto a received/related video signal broadcast whereas, in sharp contrast, in the 1987 "WALL STREET WEEK" embodiment the overlay method was performed by first **downloading software** to the microcomputer and then cuing the microcomputer with instructions signals (e.g. cuing signals) which caused the microcomputer to execute the downloaded software to generate, output, and overlay locally generated graphics onto a received/related video signal broadcast.

c) The examiner agrees that applicant is entitled to the 1981 priority date only for those claims of the present application which are limited to subject matter that was **common** to both of applicant's 1981 and 1987 disclosures; i.e. that is limited to the subject matter that was previously disclosed in the 1981 parent. Under the present circumstances ¹⁸, it is maintained that applicant is not entitled to the 1981 priority date for claims in which the **same/common support** can not be shown to exist in both of applicant's 1981 and 1987 disclosures. More specifically, the examiner rejects any allegation that the currently pending amended claims are entitled to the priority of their 1981 disclosure for claims which depend from their 1987 disclosure when it can be shown/alleged that each claim has different interpretations which allow them to be read on applicants' 1987 "WALL STREET WEEK" embodiment (via a first

¹⁸ The present disclosure: 1) comprises the 1987 disclosure and is, at best, a CIP of the disclosure filed in 1981; and 2) comprises the 1987 disclosure into which the 1981 disclosure has not been incorporated (i.e. neither literally nor by reference).

claim interpretation/construction) and on applicants' 1981 "WALL STREET WEEK" embodiment (via a second claim interpretation/construction that is different from the first); i.e. priority to the 1981 disclosure should/will only be given if applicant can show that the way that the claims are being interpreted is the same for both disclosures (i.e. if the teachings on which each claim is based is **common** to both disclosures). To permit otherwise, would improperly create a tool by which an applicant could obtain the earlier filing date of a first filed invention, for a later filed invention, by carefully drafting subsequently filed claims in a manner which allows said drafted claims to be read on both inventions via different interpretations of the same claims. In the present application, it would be improper for the examiner to give a 1981 priority date to claims that are directed to applicants' 1987 "WALL STREET WEEK" embodiment even if it can be shown that the same claims can be interpreted in a manner which allows them to be read on applicant's 1981 "WALL STREET WEEK" embodiment; i.e. unless it can show that the support that is provided for the claims by both disclosures is in fact the same/common to both disclosures. Because the disclosed structures and processes used to implement applicants' 1987 "WALL STREET WEEK" embodiment clearly differ from the disclosed structures and processes used to implement applicants' 1981 "WALL STREET WEEK" embodiment (note: parts a and B of this paragraph), the examiner maintains that the subject matter which is actually common to both disclosures, e.g. that subject matter of the 1987 disclosure which is actually entitled to priority of the 1981 disclosure, if any, is very small indeed.

7) As is evident from the claim charts filed in SN 08/470,571 on 6/7/2000, all of the recitations that are directed to the signals/instructions/data that are conveyed as ancillary signaling within Radio and TV Programming transmissions, derive their required Section 112 support from the "SPAM" signaling that was first introduced by applicants' "1987" instant disclosure (as they must given that all of the 1987 invention were described with respect to SPAM signaling). Therefor, the scope and meaning that must be given to these signals/instructions/data recitations under section 112, e.g. their broadest reasonable interpretations, is necessarily defined/interpreted based said on said "SPAM" signaling. However, "SPAM" signaling was not disclosed in the 1981 parent and, therefor, applicant's claim to the earlier 1981 filing date is again refuted; i.e. the scope/meaning imparted to the currently pending amended claims by "SPAM" of the instant "1987" disclosure would not have been imparted to these same limitations by the earlier filed 1981 disclosure which lacked any discussion of "SPAM" therein; e.g. evidencing the fact that a "different invention"/"New Matter"/"different subject matter" has now been disclosed and claimed within the instant application.

8) The examiner notes that the basic requirement of section 120 includes "continuity of disclosure". Specifically, for priority to an earlier filing date to be established, section 120 requires that the invention now sought to be patented in a child application to have been "disclosed in the manner provided by the first paragraph of section 112" within the disclosure of the parent application. Significantly, section 120 does not indicate that only the descriptive requirement of section 112-1 must be met, but instead it indicates that all of the requirements of section 112-1 must be met [e.g. this includes the "enablement" requirement and the "best mode" requirement too].

TRANSCO [38 F.3d 551; 32 U.S.P.Q.2D (BNA) 1077] has cited throughout the present prosecution. The TRANSCO decision determined that one is not required to update his "best mode" when filing a continuation. Thus, it is true that the current applicant was not required to update his "best mode" at the time of filing the instant 1987 CIP application. To the contrary, in *dicta*, Judge Rich warned that requiring an applicant to update the best mode when filing the continuation application defeats the purpose of the "continuation":

"It must be understood that the introduction of a new best mode disclosure would constitute the injection of 'new matter' into the application and automatically deprive the applicant of the benefit of the earlier filing date of the parent or original application for any claim whose validity rests on the new best mode disclosure".

Being such, to the extent that applicants may have updated their "best mode" via the filing of the 1987 CIP application (if at all), e.g. such as the introduction of the new SPAM signaling scheme, it would appear that applicants have deprived themselves of the 1981 priority date given the dicta of TRANSCO.

9) The receiver station circuitry of applicants' 1981 inventions, e.g. that disclosed in the 44 page disclosure of the 1981 parent application, all appear to have been:

- a) "pre-programmed" with the computer programming (i.e. software) that was necessary to detect and recognize the occurrence of certain predetermined digital codes in data that was embedded within received TV and Radio program transmissions; and
- b) "pre-programmed" with the computer programming (i.e. software) that instructed the receiver station circuitry as how to respond when a given one of these certain digital codes was in fact detected/recognized.

Specifically, in the 1981 disclosure, the receiver side circuitry was pre-programmed so as to be effectively "triggered"/"cued" by certain

detected/recognized ones of the embedded digital codes in order to executed a respective portion of the pre-stored software (i.e. a respective "subroutine") thereby causing the receiver station to operate in a predetermined fashion.

In contrast, the receiver station circuitry of applicants' 1987 inventions, e.g. that disclosed in the 557 page disclosure of the 1987 CIP, had the advantage that the pre-programmed software itself could now be changed/modified (i.e. "re-programmed") via a new and very different type of data, i.e. "SPAM" messages, which were now embedded within the received TV and Radio programming. The ability to re-program the receiver stations from a distance (e.g. remotely) meant that the way in which the receiver stations of the system operated/responded to detected/recognized digital codes (now transmitted within "SPAM messages" too) could be change on the fly (i.e. without a visit from a service technician being necessary).

Given the above, it seems apparent that the 1987 inventions do not represent "common subject matter" with respect to the 1981 inventions even though they can both could be operated, in very different ways, to produce/provide a similar effect/"application"; e.g. such as respective 1981 and 1987 "WALL STREET WEEK" applications. However, the vast difference in the nature of the 1987 and 1981 inventions appears to be partially masked by the repugnant use (i.e. misuse) of the "computer program" terminology by the 1987 disclosure to encompass things other than computer "software". For example, in lines 13-20 on page 427 of the instant disclosure, the 1987 "invention" was explicitly described as comprising a computer system which operated to produce combined medium combining at respective subscriber stations via the transmission of one "computer program" (e.g. software) to all the computers at all of the subscribed stations. Yet, as an alleged example such computer system operation (e.g. lines 20-34 on page 427), the 1987 disclosure repugantly cites an operation during which the transmitted SPAM messages were carrying codes which only triggered/cued specific receiver responses within already pre-programmed/re-programmed receiver station circuitry; e.g. as opposed to actually citing an operation during which "software" was being downloaded to re-program the receivers (e.g. as described in lines 5-21 on page 24 of the instant disclosure). By using the "computer program" terminology in this repugnant fashion, it appears that the 1987 disclosure attempts to impart legitimacy to the erroneous claim that the 1981 disclosure described the downloading of "computer software/programming" too; i.e. the argument being that because the trigger/cuing type codes of the 1987 disclosure have been erroneously defined as having comprised "computer programming" (e.g. software), then the corresponding cuing/trigger codes of the 1981 disclosure must be erroneously considered computer programming/software too [an erroneous position which is reflected/echoed in applicant arguments too (e.g. note example #2 under

"Section II" in the Office action mailed on 8/27/01 in SN 08/470,571]]¹⁹. The result is further confusion!

10) etc,....

¹⁹ See Appendix IV of this Office action.

xxx

APPENDIX IV: (The embedded auxiliary signaling of the 1981
parent specification did not transport computer software)

1) Applicant has alleged that his past 1981 Parent specification "implicitly" taught the downloading of "computer programming" (i.e. computer *software*).

"To the contrary, the 1981 definition [of "programming"] implicitly includes, and the 1987 definition [of "programming"] explicitly includes, computer programming in the definition".

To try justify/support this erroneous allegation, applicant attempts to weave together a tapestry of "engineered" teachings and definitions:

A) First, applicant falsely asserts that the past 1981 Parent specification literally used the term "programming" to refer to the described "instruction signals" that were communicated through the TV/RADIO networks of the disclosed "1981 inventions";

B) Applicant then correctly notes that the "instruction signals" of the past 1981 specification were described as comprising signals which instructed **preprogrammed** microcomputers to perform given tasks.

C) Next, applicant cites an outside *Dictionary* definition of the term "program" to show that the term "programming" was conventionally used to refer to "computer programming/software"; and

D) Finally, applicant erroneously concludes that when one combines the above "engineered" teachings from his past 1981 Parent specification together (A and B above), based on the cited *Dictionary* definition of "program" (C above), one "implicitly" arrives at the cited *Dictionary* definition of "program."

[i.e. applicants improperly uses an outside dictionary definition of "programming" as the means for erroneously interpreting and combining teachings from the 1981 specification in a way which allows the outside dictionary of "programming" to be retroactively created/inserted within the 1981 specification]

However, for a variety of reasons, this tapestry falls apart at the slightest touch:

1) When one looks at the way in which the 1981 "programming" terminology was coined and used throughout applicants' past 1981 Parent specification, one finds that the 1981 "programming" terminology referred to signaling which represented scheduled TV/Radio shows (i.e. TV and Radio *programs*). One finds that the 1981 "programming" terminology was never used to refer to "computer software" as applicant now wishes. In fact, despite applicants' false assertion (see "A" of this section), one finds that applicants' 1981 specification did not even use the 1981 "programming" terminology to refer to the 1981 "instruct and information signals". Quite the contrary, applicants' 1981 parent specification actually distinguished the 1981 "instruct and information signals" from the 1981 "programming." Namely, applicants' past 1981 parent specification leaves no doubt that said 1981 "instruct and information signals" constituted ancillary/auxiliary signaling that was "associated" with, and embedded within, said TV/Radio "programming"; i.e. that the information and instruct signals were distinctly different from "programming". This fact is self-evident in the following excerpts taken from applicants' 1981 parent specification:

"One method provides a technique whereby a broadcast or cablecast transmission facility can duplicate the operation of a television studio automatically through the use of instructions and information signals embedded in programming either supplied from a remote source or sources or prerecorded" (emphasis added)

[lines 32-37 of column 3]²⁰

"Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, along with information identifying the channel source of each signal, externally to code reader, 72." (emphasis added)

[lines 3-7 of column 11]

The cable head end facility contains signal strippers, 81, 85, and 89, of which models exist well known in the art, that controller/computer, 73, can instruct to remove signals from the programming as required, and signal generators, 82, 86, and 90,

²⁰ Citations have been obtained from US Patent #4,694,490.

also known in the art, that controller/computer, 73, can instruct to add signals to programming as required"

[lines 36-42 of column 12]

"One particular advantage of these methods for monitoring programming is that, by locating the Identifier signals in the audio and/or video and/or other parts of the programing that are conventionally recorded by, for example, conventional video recorders, ..."

[lines 25-29 of column 16]

"Methods for Governing or Influencing the Operation of Equipment that is External to Conventional Television and Radio Sets by Passing Instructions and Information Signal that are Embedded in Television and Radio Programing Transmissions to Such External Equipment" (emphasis added)

[Lines 34-38 of column 17]

"Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programing transmissions" (emphasis added)

[lines 39-41 of column 17]

"Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programing transmission....These [embedded instruction] signals instruct microcomputer, 205, to generate several video graphic overlays..." (emphasis added)

[lines 42-49 of column 19]

"At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission" (emphasis added)

[lines 60-63 of column 19]

Given the above, it is ridiculous for applicants to suggest that the term "programming", e.g. in the context of the past 1981 specification, referred to the "instruct and instruction signals" of applicant's past 1981 disclosure. It is even more ridiculous for applicant to suggest that it referred to "computer software".

B) It also seems clear from applicants' 1981 past parent specification that the "microcomputers" on the receiver side of the disclosed 1981 inventions were "**preprogrammed**" with the "computer programming/software" which told them how to respond to detected "instruct signals" that were embedded within received TV/Radio

"programming." More specifically, it seems apparent that each of the 1981 "instruct signals" of applicant's 1981 inventions represented cuing-type signals/commands which instructed/triggered **"preprogrammed"** microcomputers to execute respective portions of its preprogrammed software in order to perform predefined task/operation (e.g. the 1981 "instruct signals" told the 1981 microcomputers "to generate the overlay" whereas the pre-loaded 1981 computer software told said 1981 microcomputers "how to generate the overlay that was to be generated").²¹

"Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programing transmission....These [embedded instruction] signals instruct microcomputer, 205, to generate several video graphic overlays..." (emphasis added)
[lines 42-49 of column 19]

Again, contrary to applicants' erroneous assertions, there is no teaching in applicants' past 1981 specification indicating that applicants' 1981 "instruct signals" represented "computer software/programming" in any conventional sense of such terminology.

C) The past 1981 parent specification does not offer/provide a signaling mechanism and/or structure which would have been capable of handling the large continuous sequence of data bytes required to push "computer software" through TV and/or Radio networks. Such a signaling mechanism and structure was not provided until "SPAM" packeting was introduced via applicants' subsequently filed instant 1987 CIP specification. Thus, applicants' past 1981 parent specification was not enabling of the alleged "computer programming/software" feature (i.e. the alleged "computer programming/software" feature that the past 1981 specification did not even describe/disclose).

Clearly, applicants' 1981 definition and use of the term "programming" did not described or imply the presents of computer software/programming in any conventional sense of the terminology; i.e. it was in fact only used to described and refer to radio and television shows.

²¹ This being even more apparent when one reads the teaching of applicants' past 1981 Parent specification in light of the "enhanced and improved" teachings of applicants' 1987 CIP specification (i.e. a 1987 specification in which cuing-type signaling was enhanced/improved by the added ability of the 1987 systems to re-program downstream devices via downloaded computer software).

2) On page 150 of the amendment filed 1/28/2002 in 08/470,571, applicant states:

"The 1981 specification states:

It is the object of this invention to unlock this potential by the development of means and methods which permit programming to communicate with equipment that is external to television receivers and radio receivers, particularly computers and computer peripherals such as printers

1981 Spec., Col. 1, ll.36-41

Thus applicants' 1981 specification makes it clear that 'programming' is not just TV and Radio shows- It can also include instructions, codes, and signals that are communicated to and control e.g., computers and computer peripherals. These instructions, codes, and signals clearly fall within the definition of programming and to find otherwise is to conveniently and purposefully overlook the entire purpose of the invention.

(emphasis added)

In reading applicants' 1981 Specification, it seems that "**the *entire purpose***" of *the invention*²², to which applicant alludes, was the ability to provide multimedia presentations in which TV or Radio "programming" was displayed along with another supplemental media presentation; wherein the content of the supplemental media presentation was related to the content TV and Radio "programming" thereby *enhancing* the content of the displayed TV and Radio "programming". To achieve this goal, ancillary "instruct signals" and/or other ancillary "information signals" were "associated" with, and "embedded" within, the TV or Radio "programming." These embedded "instruct and information signals" allowed received TV and Radio *programming* "to communicate" with equipment that was external to the TV and Radio receivers in order to produce the supplemental media presentation. Specifically, the associated "instruct and information signals", which were embedded within the received Radio or TV "programming", were themselves transferred to the external equipment thereby causing the external equipment to produce said supplemental media presentation. Being such, despite applicants' current allegations, it is still crystal clear from the 1981 disclosure itself that the 1981 "programming" terminology was used in the 1981 specification in the conventional sense of referring to TV and Radio signaling which represented scheduled TV and Radio shows. To suggest otherwise, e.g. in the words of applicant, is to "*conveniently and purposefully*" ignore the fact that applicants' 1981 specification unquestionably

²² The examiner notes that applicant's 1981 inventions appear to serve many purposes. Therefore, the examiner does not believe that "the invention" of applicant's 1981 specification has one "entire purpose" as is now alleged by applicant; i.e. if it does have one "entire purpose", then it is not clear to the examiner what that "entire purpose" actually is (clarification is requested).

describes the associated "instruct and information signals" as being separate/distinct entities with respect to the TV and Radio "programming" into which these associated "instruct and information signals" were embedded. This fact is self evident in the following excerpts taken from the 1981 specification itself:

"One method provides a technique whereby a broadcast or cablecast transmission facility can duplicate the operation of a television studio automatically through the use of *instructions and information signals embedded in programing* either supplied from a remote source or sources or prerecorded" (emphasis added)
[lines 32-37 of column 3]²³

"Signal processor, 71, has means, described above, to *identify and separate the instruction and information signals from their associated programing* and pass them, along with information identifying the channel source of each signal, externally to code reader, 72." (emphasis added)
[lines 3-7 of column 11]

"The cable head end facility contains signal strippers, 81, 85, and 89, of which models exist well known in the art, that controller/computer, 73, *can instruct to remove signals from the programing* as required, and signal generators, 82, 86, and 90, also known in the art, that controller/computer, 73, *can instruct to add signals to programing* as required" (emphasis added)
[lines 36-42 of column 12]

"One particular advantage of these methods for monitoring programming is that, by *locating the identifier signals in the audio and/or video and/or other parts of the programing* that are conventionally recorded by, for example, conventional video recorders, ..." (emphasis added)
[lines 25-29 of column 16]

"Methods for Governing or Influencing the Operation of Equipment that is External to Conventional Television and Radio Sets by Passing *Instructions and Information Signal that are Embedded in Television and Radio Programing* Transmissions to Such External Equipment" (emphasis added)
[Lines 34-38 of column 17]

"Signal processor apparatus have the ability to identify *instruction and information signals in one or more inputted television and radio programing* transmissions" (emphasis added)
[lines 39-41 of column 17]

"Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to *instruction signals embedded in the "Wall Street Week" programing* transmission....These [embedded instruction] signals instruct microcomputer, 205, to generate several video graphic overlays..." (emphasis added)
[lines 42-49 of column 19]

"At this point, *an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission*" (emphasis added)
[lines 60-63 of column 19]

²³ Citations have been obtained from US Patent #4,694,490.

XXX

APPENDIX V: (1987 "SPAM signals" VS 1981 "SIGNAL
UNITS" AND "SIGNAL WORDS")

1) The timeline:

A) The *discarded*²⁴ 1981 parent specification:

- 1) The 1981 parent specification coined the term "signal unit" to refer to a sequence of bits representing a discrete instruction or data segment.
- 2) The 1981 parent specification coined the term "signal word" to refer to the appearance of a sequence of bits, representing one or more of said signal units (or portions thereof), at a given time and location of a TV signal transmission.
- 3) One column of the 1981 parent specification described a 1981 "Wall Street Week" embodiment of alleged invention in which the above described "signal words" and "signal units" carried simple commands/instructions which triggered each receiver station to execute locally stored computer programming/software to locally generate and locally display a user specific program related overlay.

B) The *new* 1987 CIP specification:

- 1) The 1987 CIP specification cosmetically carries the 1981 "signal unit" and "signal word" terminology and definitions forward into the first few pages (e.g. 1-27) of the 1987 specification;
- 2) These first few pages of the 1987 CIP specification (e.g. @ 20-27) also describe a first 1987 "Wall Street Week" embodiment of alleged invention that has been *expanded* with respect to the 1981 embodiment in that the "signal units" and "signal words" now carry/include computer software that is used to program the receiver stations (in addition to the simple commands that were conveyed by said "words"/ "units" in the 1981 "Wall Street Week" embodiment of the discarded 1981 specification) [i.e. there is a serious question, however, as to whether (and how) the described 1981 signal words/units, as carried forward into the 1987 CIP, were capable of handling such a continuous transmission];
- 3) At this point (note page 40), the 1987 CIP specification introduces a new "SPAM signal" format that replaces the 1981 "signal unit" and "signal word" format; the 1981 "signal unit"/"signal word" terminology and format is never discussed again within the remaining 500 pages of the 1987 CIP

²⁴ "Discarded" in the sense that the 1981 disclosure was not incorporated into the 1987 CIP specification in any immediately discernible fashion; i.e. the 1981 disclosure was neither copied into the 1987 CIP specification nor was it incorporated by reference. Therefore, the new 1987 CIP specification stands alone as the instant specification from which all section 112 issues depend.

specification that follow. In fact, the new 1987 "SPAM signal" terminology is defined in the 1987 CIP specification to be:

Signal Processing Apparatus and Method signals of the present invention(s)

This definition leaves little doubt that it is this new 1987 SPAM signaling that is used by the disclosed/claimed 1987 inventions of instant 1987 CIP specification; i.e. in spite of the fact that the 1981 "signal unit" and "signal word" terminology initially appear at the beginning of the 1987 CIP specification. Also of significance, is the fact that it is only this newly introduced 1987 SPAM signal format that provides an adequately disclosed mechanism by which continuous sequences of codes, e.g. computer programming/software, can be conveyed to the receiver stations [i.e. it was the introduction of the 1987 SPAM signals in the 1987 CIP specification which "enabled" such continuous code transmissions];

4) Also, buried within these next 500 pages of the 1987 CIP specification are further *expanded* 1987 "Wall Street Week" embodiments which allegedly build on the first expanded 1987 embodiment but which, in reality, totally abandon the 1981 "signal unit" and "signal word" data format in favor of the newly introduced 1987 SPAM signal format. This is evident by the following:

a) By the fact that the term "signal word" takes on a completely new/different meaning within these 500 pages (i.e. that the "signal word" terminology now refers to the bytes of digital data that make up the SPAM signals rather than the time/location in the TV transmission at which the signaling is inserted); and

b) The definition of the "SPAM signal" terminology itself indicates that "SPAM" signaling was the discrete signaling of the 1987 inventions:

Signal Processing Apparatus and Method signals of the present invention(s).

The timeline shows: That applicants 1981 parent specification first coined the "signal unit" and "signal word" terminology to described the process by which the simple instructions and information of the 1981 inventions were transported within the VBI of TV programming (e.g. the 1981 "Wall Street Week" embodiment). The simple instructions and information of the 1981 inventions were not described as having transported computer software despite applicants' allegation to the contrary [See appendix IV of this Office action].

The noted 1981 "signal unit" and "signal word" terminology and definitions were themselves carried forward into the first few pages of the 1987 CIP specification. However, the relevance of this 1981 signal unit/word terminology and format was short lived in the 1987 specification. That is, the 1987 CIP specification immediately attempted to expand the scope/utility of the 1981 terminology via the first 1987 "Wall Street Week" embodiment of pages 20-27 to include/handle continuous sequences of data representing computer software; although the way in which said 1981 words/units were supposedly configured to carry computer software was never addressed or explained by the 1987 CIP. Instead, the 1981 "signal unit" and "signal word" terminology and format was immediately discarded in favor of the 1987 SPAM signal terminology and format which was, by definition, the signaling "of the 1987 inventions.

2) The 1981 auxiliary signaling of the 1981 inventions of the 1981 specification were described as having transmitted 1981 "signal units." As described in the 1981 specification, each of these 1981 signal unit represented either:

- 1) A complete signal instruction; or
- 2) A complete information message unit.

[NOTE: lines 66 and 67 of column 2 in US patent #4,704,725]

The content of these 1981 signal units were explicitly exemplified by the 1981 specification as having comprised:

- 1) A unique code identifying a program unit;
- 2) A unique purchase order number; and
- 3) A complete general instruction identifying whether a programming unit was to be retransmitted immediately or recorded for delayed transmission.

[NOTE: lines 68 and 69 of column 2, and lines 1-4 of column 4 in US patent #4,704,725]

Clearly, as described, all three of these listed "signal unit" contents:

- 1) Represented digital codes that functioned to "cue"/"trigger" some kind of response or action by receiver side circuitry of the system; and
- 2) Were, or would obviously have been, represented by digital codes of a relatively small or limited number of digital bits.

More significantly, there is not a single description within the 1981 specification of a 1981 "signal unit" content that:

- 1) Did not function simply to "cue"/"trigger" some kind of receiver side response or action; and
- 2) Was not, or could not be, represented by a digital code of a limited number of bits.

And most significantly, there is not description (or even a suggestion) in the 1981 specification of a 1981 "signal word" content comprised of computer programming/software.

Early on, the instant 1987 CIP specification seems to indicate that the 1981 "signal unit" terminology has been carried forward into, and will be used throughout the instant 1987 CIP specification, in a fashion that is unenhanced and unmodified from the way it was defined and used in the original 1981 specification [SEE: lines 17-24 in column 10 of US Patent #5,335,277]. This is simply untrue. The following is noted:

- 1) The instant 1987 CIP specification purports to describe a first embodiment of invention which, allegedly, utilizes the 1981 "signal units" of the 1981 specification [SEE the discussion under the heading "One Combined Medium" that begins in line 50 of column 12 of US Patent #5,335,277]. However, in this described 1987 embodiment of invention, the described 1987 "signal units" were not limited to signal units that simply "cue"/"trigger" receiver side responses and actions as in the case of the 1981 signal units of the 1981 inventions, but the 1987 signal units were somehow enhanced and modified relative to the 1981 "signal units" so as to be used, allegedly, to download entire sequences of digital code representing computer programming/software that actually defined the receiver side responses and actions that are to be "cued"/"triggered" by subsequently transmitted 1987 signal word digital codes [NOTE: lines 20-50 in column 15 of US Patent #5,335,277].

That is, wherein the 1981 inventions of the 1981 specification transmitted 1981 "signal units" which "cued"/"triggered" various kinds of receiver side responses and actions, the 1987 "signal units" used by the first described 1987 embodiment allegedly transmitted computer programming/software which defined, e.g. on the fly, the responses and actions that were then "cued"/"triggered" on the receiver side by subsequently transmitted digital codes. However, it is not clear from the 1987 specification how the 1981 "signal word" and 1981 "signal units" format of the 1981 specification has itself been enhanced/modified so as to be capable of handling the long sequences of digital code required to transmit such computer programming. In fact the 1987 disclosure never appears to provide such an explanation and instead introduces a new 1987 SPAM signal format which actually provides the mechanism by which such software is transported.

Thus, the 1981 "signal unit" and "signal word" terminology is: initially carried forward into the 1987 specification; is immediately expanded so as to encompass computer software; and is then discarded in favor of SPAM signaling. This process only gives the illusion that the 1987 SPAM signals and the 1981 signal words/units somehow represent "common subject matter".

3) The specification of applicants' 1981 parent application and the specification of applicants' instant 1987 CIP specification describe respective 1981 and 1987 systems/methods which define respective 1981 and 1987 inventions. In the broadest sense, the 1981 systems/methods of the 1981 parent specification and the 1987 systems/methods of the instant 1987 CIP specification have some clear and obvious similarities. One of these similarities being that the 1981 systems/methods and the 1987 CIP systems/methods operated to embed respective 1981 and 1987 auxiliary signaling within the VBI of broadcast/cablecast TV programming wherein the embedded auxiliary signaling of both the 1981 and the 1987 systems/methods was used to control processing that was performed at downstream TV receiving station locations; i.e. wherein, in at least some of the cases, the 1981 and the 1987 processing was, likewise, similar. However, given the clear and obvious similarities, the 1987 systems/methods of the instant 1987 CIP specification are also very different from the 1981 systems/methods of the 1981 parent specification. For example, while both 1981 and the 1987 systems/methods used respective 1981 and 1987 auxiliary signaling to control downstream processing within respective 1981 and 1987 television networks, the respective 1981 and 1987 auxiliary signaling itself was very different in form, content, and function:

1) FORM OF THE 1981 AND THE 1987 AUXILIARY SIGNALING:

As described in the 1981 parent specification, 1981 auxiliary signaling of the 1981 apparatus/methods was used to transmit discrete 1981 "signal units", wherein each of these discrete "signal units" represented a "complete instruction or information message unit"; i.e.,

- a) A unique code for identifying a programming unit;
- b) A unique purchase number; or
- c) A general instruction.

As described in the 1981 parent specification, the 1981 apparatus/methods used 1981 "signal words" to transport these 1981 "signal units" through the 1981 TV and Radio networks, wherein each 1981 "signal word" was explicitly defined by the 1981 specification as a "discrete appearance" of 1981 auxiliary signaling within a TV/Radio transmission. More specifically, each 1981 "signal word" (i.e.

that is, each "appearance" of the auxiliary signaling at a given time and location within the video/audio transmission) comprised a string of one or more data bits encoded together on a single line of the video or sequentially in the audio, wherein this string of one or more data bits was assembled from the bits of one or more of said 1981 "signal units". Significantly, as described in the 1981 specification, it was the discrete 1981 "signal words" (i.e. that is, each appearance of auxiliary signaling at a given time and location within the TV/Radio transmission) that were to have comprised added bits for identifying the beginnings and ends of each of the 1981 "signal word"; i.e. providing a clear indication that the 1981 "signal words" represented the 1981 transport *packet* mechanism of the 1981 systems/methods. Further, from such 1981 descriptions/definitions, it seems quite apparent that the 1981 auxiliary signaling of the 1981 specification was transmitted *synchronously* with the respect to the TV/Radio transmission into which it was embedded [i.e. that is, **both** the bits of the "signal units" and the bits of the "signal words" were themselves embedded at specific timings/locations within TV/radio transmission wherein these specific timings/locations had to be known by (i.e. preprogrammed within) the receiver station locations prior to transmission of said 1981 auxiliary signaling]. This *synchronous* nature of the 1981 auxiliary signaling appears to be confirmed by descriptions found throughout the 1981 specification:

"In addition, the pattern of the composition, timing, and location of the signals may vary in such ways that only receiving apparatus that are ***preinformed*** regarding the patterns obtain at any given time will process the signals correctly. Both the arrangement of signal units in the signal words and the locations, timings, and lengths of signal words in individual transmissions or groups of transmissions may vary in fashions that can only be interpreted accurately by apparatus that are preprogrammed with keys to such variations" (emphasis added)

"The controller, 20, can instruct signal decoders, 30 and 40, when, where, and how to look for signal words, which allows signal words to be received in any pattern or patterns. It can instruct buffer/comparator, 8, how to assemble signal words into signal units and join units for further transfer ..."

In contrast to the above, the instant 1987 CIP specification explicitly coined the term "**SPAM**" to mean:

"Signal Processing Apparatus and Methods **of the present invention**";

i.e., wherein said "*present invention*" is that which is described and claimed only with respect to the instant 1987 CIP specification. The 1987 CIP specification uses the term "**SPAM signals**" to refer to the 1987 *auxiliary signals* of said

"SPAM" (again, wherein "SPAM" is *Signal Processing Apparatus and Methods* of the invention(s) of the 1987 CIP). These 1987 "SPAM signals" are explicitly described and shown via figures 2E-2K of the instant 1987 CIP specification. As described/illustrated with respect to figures 2E-2K, the 1987 auxiliary "SPAM" signaling of the 1987 CIP specification comprised different types of discrete SPAM packet signals, wherein certain ones of these discrete SPAM packet signals comprised "information segments" for transporting variable length payloads of digital information. In the case of this 1987 auxiliary "SPAM" signaling, it was the discrete 1987 SPAM packets themselves that contain synchronization and identification codes used by the receiver/decoder side; i.e. as opposed to each "appearance" of the auxiliary signaling at a given time/location of the TV/Radio transmission (that is, as opposed to the 1981 "signal words" that were used by the 1981 systems/methods). This *modification* in the format of the 1987 CIP auxiliary signaling, with respect to the 1981 auxiliary signaling, imparts significant advantages to the 1987 CIP apparatus/methods over the 1981 apparatus/methods. Namely, the 1987 SPAM signal format allows the discrete SPAM packet signals of the 1987 apparatus and methods to be assembled and sequentially embedded back-to-back, one after another, throughout the entire "normal location" of the TV/Radio transmissions (i.e. throughout the entire selected line intervals of the VBI in the case of TV transmissions). That is, the 1987 "SPAM" transport packet format of the 1987 CIP specification is clearly advantageous over the discrete 1981 "signal word" format of the 1981 specification in that it enables the discrete SPAM packets of the 1987 apparatus/methods to be transmitted continuously and *asynchronously* with respect to the "normal locations" of the TV signaling, thereby advantageously:

- a) Enabling full use of the entire bandwidth that is available for the transmission of auxiliary signaling;
- b) Enabling the receiver station to detect and determined the specific timing/locations of the bits of the desired/required auxiliary signaling within said "normal locations" without have know and/or be informed of said location in advance of receiving the auxiliary signal transmission; and
- c) Enabling said available bandwidth adaptively devoted to sources based on need/demand.

Significantly, all of the 1987 embodiments of invention that were described in the instant 1987 CIP specification are "SPAM" methods/apparatus which were implemented using said discrete 1987 "SPAM signals" of figures 2E-2K of the 1987 disclosure.

In summary, it seems quite apparent that form of the discrete 1987 "SPAM signal" transport packets of the 1987 CIP SPAM methods/apparatus is different

from, and advantageous over, the form of the discrete "signal word" *transport packets* of the 1981 parent methods/apparatus. This difference is evident in the fact that the 1987 SPAM packets are sequentially transmitted *asynchronously*, e.g. one after another, throughout the entire "normal location" of the TV/Radio transmission wherein there is not a one-to-one correspondence between "SPAM" signal packets and "appearances" within the transmission, whereas each 1981 "signal word" *transport packet* of the 1981 parent methods/apparatus was transmitted *synchronously* within a predetermined interval of the TV/Radio transmission wherein there was a one-to-one correspondence between "signal words" and their appearances within the transmission (i.e. each 1981 "signal word" was, by definition, the discrete "appearance" of auxiliary signaling at a given time and location (i.e. a specific horizontal line of the VBI) within a TV/Radio transmission).

Likewise, it also seems quite apparent that the discrete 1987 "SPAM signal" transport packets of the instant 1987 CIP methods/apparatus are unquestionably different from the discrete "signal units" the 1981 parent methods/apparatus too for reasons evident in the following:

- a) In the fact that the 1987 SPAM signal packets clearly represent the transport mechanism by which different complete instruction and information message units are conveyed through the 1987 TV/Radio network whereas the 1981 "signal units" of the 1981 disclosure represented the complete instruction and message units which were to be transmitted; and
- b) In the fact that the 1987 SPAM signal packets include synchronizing information, e.g. such as the EOF (end-of-field) codes, by which the receiver/decoder detects the end of a previous SPAM packet and the beginning of the next packet (i.e. meaning that location of the data of the SPAM packets need not be known by, or preprogrammed into, the receiver stations in advance of transmission (i.e. not the case with the 1981 "signal units" of the 1981 specification).

And while it is true that the 1981 "signal unit" and the 1981 "signal word" terminology and definitions were included at the beginning of the instant 1987 CIP specification, the reason for their presence (i.e. how they relate to the 1987 "SPAM" and the 1987 "SPAM signals") is confusing and unclear. This is because:

- a) ***All*** of the 1987 SPAM embodiments of invention that are described within the 1987 CIP specification are, by definition, "SPAM" systems/methods which are implemented, by definition, using 1987 "SPAM signals" (i.e. 1987 CIP specification explicitly coining the "SPAM" terminology to mean: "Signal Processing Apparatus and Methods ***of the present invention***");

b) The 1981 "signal word" and 1981 "signal unit" terminology and definitions appear to "hang" by themselves within the 1987 CIP specification; i.e. a connection between this 1981 terminology and the 1987 SPAM disclosures is never explained or established.

The true extent of this "disconnect" seems to be evidenced in the fact that the same "signal word" terminology takes on an completely new and different meaning everywhere else that it appears in the 1987 specification (this in spite of the fact that the 1981 "signal unit", as carried forward into the 1987 CIP specification, explicitly states, quite erroneously, that the 1981 "signal word" definition will be used and adopted throughout the entire 1987 CIP specification).²⁵

2) CONTENT AND FUNCTION OF THE 1981 AND THE 1987 AUXILIARY SIGNALING:

The 1987 auxiliary signaling was described as, and was clearly capable of, transporting continuous code sequences such as computer software whereas the 1981 auxiliary signal was not described as, and does not appear to have been, capable of carrying continuous codes sequences such as computer software [SEE appendix III of this Office action]

²⁵ When describing 1987 "SPAM" and 1987 "SPAM signals", the 1987 disclosure uses the term "signal word" in a conventional sense to refer to bytes of digital data whereas the 1981 disclosure/definition explicitly defined it to be: "the appearance of auxiliary signaling within a TV/Radio transmission."

xxx

APPENDIX VI: (A List of Common Issues)

THE "LIST":

1) In lines 2-8 on page 142 of the amendment filed on 1/28/2002 in application SN 08/470,571, applicants suggest that the examiner has objected to the fact that applicants provided citations showing dual support for the claims with respect to both the 1981 and 1987 disclosures. No such objection was ever been raised by the examiner. To the contrary, the examiner finds applicants' citations of dual 1981 and 1987 support to be one of the most helpful aids that applicants have provided to date when applicants' allege priority to the 1981 filing date (i.e. especially when presented in the form of claim charts).

Having said this, the fact remains that examiner/Office was unquestionably misled by the many statements made by applicants concerning the "consequences" of Section 120 "priority". The reason that these statements misled the examiner/Office seems to be self-evident from the statements themselves. For example, in the last 7 lines on page 24 of the Appeal Brief filed in SN 08/113,329 on 9/17/1996, applicants state:

"The case law makes clear that the only inquiry concerning claims filed in a subsequent continuation application pursuant to Section 120 is whether they are adequately supported in under Section 112, first paragraph, in the initial application. If the support exists, the inquiry is at an end."

And statements made in the remarks section of many of applicants' amendments in which applicants state:

"The present application claims priority under 35 USC §120 of the following applications.....Consequently, Applicants will demonstrate disclosure only with respect to the '81 case,..."
[e.g. see lines 9-21 on page 000507 of the Appendix in the document mailed on 9/10/01 in SN 08/474,139]

These statements misled the examiner/Office into believing that, as a consequence of Section 120, applicants were permitted to use the disclosure of their 1981 parent application alone, e.g. in place of the instant 1987 CIP disclosure, to fulfill section 112 requirements when addressing/replying to Section 112 rejections (i.e. in those situation which the 1981 priority date was alleged). However, the examiner/Office now understands that, because applicants' past 1981 parent disclosure was not incorporated into the instant disclosure, the 1981 specification cannot be relied upon by applicants for showing of section 112 support when addressing/responding to rejections made under Section 112; i.e. all section 112 Support must come from the instant "1987" CIP disclosure alone.

The "objections" made by the examiner in 08/470,571 were raised because the examiner perceived a continuation, on the part of applicants, of the same arguments that misled the examiner/Office in the first place. By raising these "objections", the examiner hoped to elicit a response from applicants acknowledging the fact that the instant "1987" disclosure was the only disclosure which could be used to fulfill the requirements of section 112 with respect to the limitations of the currently pending amended claims (the significance of the 1981 disclosure is relegated only to the secondary issue of Section 120 priority). The examiner wanted to be sure that the examiner and applicants were now on the same page concerning this issue. And, on at least one occasion, such an acknowledgment appears to have been provided by applicants [see the last 5 lines on page 141 of the amendment filed on 1/28/2002 in SN 08/470,571].

2) Applicants do not believe that "common subject matter" is required for "priority" under Section 120. Instead, according to applicants, the only thing that applicants need to do in order to obtain the earlier 1981 filing date for their currently pending amended claims, is to show that each of his pending amended claims can be given different 1987 and 1981 claim interpretations which allows each claim to be supported, in parallel, by "different subject matter" from the 1981 and 1987 specifications.

"[Section] 120 does not require an applicant to demonstrate that the disclosures relied upon under §120 have anything in common besides their ability to separately comply with §112-1 with respect to the claims for which priority is sought. Accordingly, the Examiner's focus on comparing the support from the two applications for similarity or common subject matter is improper and irrelevant because all applicants are required to do is satisfy §120 is show that each disclosure meets the requirements of §112-1 for a given claim."

(emphasis added)

[Page 141 of applicants' response filed on 1/28/2002 in application S.N. 08/470,571]

"Accordingly, the law requires a two part test in which the applicant separately demonstrates § 112 support for each application. In the FOA, the examiner distorts this straightforward test by imposing a third element of the test whereby the § 112 support from each application consists of 'common subject matter.'"

[see the last 10 lines on page 137 of the response filed on 1/28/2002 in SN 08/470,571].

For the reasons that have been in appendix II addressed above, applicants' position seems to be in error. Namely, applicants appear to be confusing the requirements of "anticipation" under section 102 with the actual requirements of

"adequate written description" under section 112-1 that has literally been incorporated into section 120.

"However, as mentioned earlier, a continuing application is entitled to rely on the earlier filing date of an earlier application only with respect to subject matter common to both applications" (emphasis added)

[In Transco Products, Inc., v. Performance Contracting, Inc., 32 USPQ2d 1077 [**18]]

"Any claim in a continuation-in-part application that is directed solely to subject matter adequately disclosed under 35 U.S.C. 112 in the parent application is entitled to the filing date of the parent application."

[In Transco Products, Inc., v. Performance Contracting, Inc., 32 USPQ2d 1077 [**18]]

"Assuming the common inventorship, copendency, and cross-reference required by section 120, that section further requires only that the invention be disclosed in the parent application in such manner as to comply with the first paragraph of section 112 and be the same invention as that disclosed in the later application." (emphasis added)

[Kirschner, 305 F.2d 897 (C.C.PA1962)]

3) In the last 5 lines on page 141 of the response filed on 1/28/2002 in 08/470,571, applicants acknowledged that the 1981 application was not incorporated into the 1987 application. As a consequence, applicants also appear to understand that all Section 112 support must come solely from the "instant" 1987 disclosure if the requirements of section 112 are to be satisfied. If applicants know such to be true, then it is not understood how or why applicants still adopt the following position:

"the [examiner's] assumption that 'all limitations of the currently pending claims are necessarily directed to that which is described in the present 1987 disclosure' is mistaken and wholly unsupported." ²⁶

[lines 8-10 on page 144 of the amendment filed in 08/470,571 on 1/28/2002].

Namely, if all section 112-1 support for all of the claims' limitations must necessarily come from the instant "1987" disclosure alone (e.g. in light that the disclosure of the 1981 parent was not formally incorporated into the instant 1987 disclosure), then how can a limitation of a claim be directed to (i.e. and obtain required section 112-1 support from) anything but that which is described within the said instant 1987 disclosure?

²⁶ Contrary to applicants' position, the examiner maintains that a pending claim must necessarily be directed to that which is described in the instant specification. This is not to say that the resulting scope of the pending claim is limited only to that which it must necessarily be directed.

4) Applicants continue to allege that displayed teletext images do not constitute "locally generated" images. Applicants are wrong [SEE paragraph C-3 of this Office action].

5) Applicants' 1987 inventions used a "SPAM" transmission packet structure to transmit ancillary information through the TV broadcast networks. By using the "SPAM" packet structure, a transmission scheme was established in which a piece of coherent "information", e.g. such as a complete "processor instruction", could be broken down into a plurality of "partial information" segments and communicated through the TV network within/as respective "discrete (packet) signals". On the receiver side of the 1987 inventions, the partial information from the plurality of discrete signals could be recovered and re-organized back into the original piece of coherent "information" (e.g. re-organized back into the single complete processor instruction).

Applicants have alleged the above described "partial information" transmission scheme is a key feature which distinguishes applicants' alleged 1987 inventions over Teletext "prior art". Applicants' allegation represents a huge misunderstanding/misrepresentation of the Teletext "prior art". In fact, via such arguments, it appears that applicants are effectively trying to re-invent a foundation on which the Teletext "prior art" was actually built [e.g. see the arguments which begin at the top of page 354 and extend to the bottom of page 356 in the response filed on 1/28/02 in SN 08/470,571].

Specifically, standardized Teletext was based on the recognition that vacant lines occurring during the VBI of TV signal transmissions could be used to transmit/communicate embedded frames/"pages" of character/graphics information along with the TV programming. However, it was immediately recognized that each video line did not have sufficient bandwidth to carry an entire frame/page of the character/graphics data. Therefore, the prior art Teletext systems established Teletext packet structures by which "partial image/information" segments (e.g. such as single "rows" of character and control information) could be communicated via respective discrete packetized signals which were embedded within respective discrete television line intervals. On the receiver side of the Teletext "prior art", the partial information segments from the plurality of discrete packetized signals were recovered and re-organized back into the original frame/pages of character/graphics information in order to "locally generate" a Teletext image for display. However, the correlation that exists between applicant's "SPAM" transmission scheme and prior art Teletext transmission schemes does not end here!

In addition to the transmission of character/graphic frames/pages, those of ordinary skill in the art quickly recognized that the prior art Teletext transmission schemes could be "extended" so as to carry other kinds of information; e.g. "Telesoftware"(i.e. computer programming), remote control signaling, etc.,...

This additional information was carried using the same packetized Teletext structure previously established for the character/graphic image data. For example, Telesoftware was also broken down into "partial information" segments to be carried as "rows" of character-like data within respective Teletext packets of one or more Teletext pages (e.g. depending on the size of the Telesoftware program that was being communicated). On the receiver side, the "partial information" segments of the additional information were then recovered from the transmitted discrete packet signals and were re-organized back into its original form (e.g. the complete "Telesoftware" program was reconstructed from the discrete partial programming segments).

For the reasons discussed above, it appears that applicants' 1987 packetized "SPAM" structure constitutes applicants' version of an "extended" Teletext system [SEE part "A." under "Section XI" in the Office action mailed 8/27/01 in SN 08/470,571]. And, for the reasons discussed above, the examiner continues to refute applicants' position that claim recitations directed to "discrete signals" and/or "partial information" add anything to the claims which would avoid/overcome Teletext "prior art" applied under sections 102 or 103.

6) Applicants point out that term "computer software/programming" has been defined as: "a series of instructions that controls the operation of a computer". Stretching this definition, applicants erroneously suggest that the term "computer software" encompasses: "any series of instructions that controls the operation of a computer". And finally, using this stretched definition, applicant argues that each series of transmitted cuing-type codes which were described in his 1981 parent application *implicitly* taught the transmission and/or downloading of "computer software" in view that each of these series of codes represented "instructions which controlled the operation of a computer". Applicants' argument is lame. That is, if one were to accept applicants' argument, then:

- a) A computer mouse and computer keyboard suddenly become generators of "computer software" because they too generate series of instructions that are used to control the operation of a computer;
- b) Teletext data itself, when received by a CPU implemented decoder, suddenly becomes "computer software" because it too represents series of instructions which are used to instruct a computer as to how to generate an image for display;
- c) etc,...

Clearly, applicants' argument twists the definition of "computer software" in a way that is repugnant to its conventional use/meaning in order to obtain alleged "support" as of the 1981 filing date for something that was not shown to be in his

possession, i.e. was not disclosed, until the filing of his 1987 CIP application; e.g. namely, the downloading of computer software.²⁷
[SEE appendix IV of this Office action]

7) While applicants have alleged that 1987 "computer software/programming" recitations should be stretched so as to retroactively find section 112-1 support from things which were not "computer software/programming"²⁸ (i.e. a series of cuing-type codes/signals from the 1981 disclosure), applicants have also taken the opposite approach by alleging that circuit structures which operated to process/execute teletext signals (i.e. specifically Teletext decoders) are not encompassed by the "signal processor" recitations of ones of their pending amended claims.²⁹ The examiner disagrees noting that such arguments are in conflict with applicants' own written description [e.g. note lines 37-38 in column 205 of applicants' own US Patent #5,335,277]. Specifically, not only are Teletext decoders "signal processors" in any conventional sense of such terminology, but Teletext decoders are in fact "signal processors" within the context of applicants' own alleged invention. More to the point, the Teletext decoders of the applied prior art are like the "SPAM" decoders of applicants' own alleged inventions in that both decoders operated to extract, process, and execute packets of encoded information/instructions distributed to them, at least "*preferably*", via the VBI of broadcasted and/or cablecasted TV programming [see section c of this Office action]. Namely, the packets of encoded information comprised *Teletext data packets* in the case of conventional Teletext decoders and comprised *SPAM data packets* in the case of the SPAM decoders of applicants' alleged invention.³⁰ Applicants' suggestion that conventional Teletext decoders should somehow be excluded by the "signal processor" recitations of his pending claims is, "NONSENSE."³¹

²⁷ In the supplemental response filed 5/06/2002 in 08/470,571, applicant now submits a different version of essentially the same argument [see part "P)" in "SECTION I" of the latest Office action mailed in 08/470,571].

²⁸ This erroneous *reading* has been used to allege a 1981 "priority" date for claim recitations which are directed to the 1987 "computer software/programming" features of the instant 1987 CIP specification.

²⁹ This erroneous *reading* has been used to try to distinguish which is claimed over applied teletext "prior art".

³⁰ In fact, for reasons which will be addressed in more detail below, the examiner maintains that the "SPAM" data packets of applicants' alleged invention represent, for all intents and purposes, little more than applicants' own version of a Teletext system in which the function of its Teletext data packets have been "extended" so as to carry more than just the normal displayable character/graphics code (e.g. "extended" to carry control signals, Telesoftware, etc,...).

³¹ NOTE:

1) That *typical* Teletext decoders sequentially performed steps of signal slicing/separation, serial-to-parallel conversion, signal storage, ASCII code to pixel data translation, etc... all which were recognized as having comprised steps of "signal processing" [the last 16 lines on page 5 of the appendix that is attached to the "PETITION FOR RULEMAKING" which was filed with the FCC on 3/26/1981 by the "United Kingdom Teletext Industry Group" which explicitly indicates Teletext decoders as having performed "signal processing"]; and

8) The examiner has always maintained that applicants' own 1987 "SPAM" transmission scheme, as described in the context of television distribution, constitutes applicants' version of an "extended Teletext system".³² However, when Teletext "prior art" has been applied against applicants' claims, applicants become hostile to the suggestion that there is any correlation between their "SPAM" transmission system and conventional Teletext transmission systems.³³ Yet, on the other hand, applicants appear to openly believe that the scope of many pending claims encompass the "WEATHER STAR" system/receiver technology which, to the extent understood by the examiner, is a Teletext based technology.³⁴ If applicants' claimed "SPAM" systems/receivers encompass Teletext based systems/receivers such as the "WEATHER STAR" system/receiver technology, then how can applicants possibly suggest that "SPAM" and Teletext are not correlated/analogous technologies?

9) Applicants and applicants' originally filed 1987 disclosure both seem to have alleged that "digital television signals/programming", of the type that is recited in many of applicants' pending amended claims, was notoriously well known in the art at the time of their alleged invention. The examiner has challenged these allegations and has requested that applicants submit "prior art"/evidence that shows such to be true. In response to the examiners' request, applicants have submitted U.S. Patent #3,906,480 to Schwartz et al. as allegedly evidencing the conventional "digital television signal" technology on which their disclosure and amended claims were/are based [note the last 11 lines on page 97 and lines 3-6 on page 98 of the amendment filed on 6/7/2000 in SN 08/470,571]. The examiner continues to be mystified by this submission. The examiner points out that the cited Schwartz et al. patent describes a computer display system in which a computer was used to generate, albeit digitally, *frames* of vector encoded graphic/character information which were then transferred, via a data

2) that such processing was even true in the unusual "ideograph" decoders of applicants' argument [i.e. see the block labeled "Teletext signal processor" in figure 10 of the NHK article "A Teletext System for Ideographs" by Numaguchi et al.].

³² The term "extended Teletext" is being used here to refer to Teletext systems that have been "extended" so as to carry other types of information beyond the normal/typical coded Teletext character/graphic information. One alleged novel feature of applicants' SPAM packets was its ability to carry and distribute computer software. However, contrary to applicants' allegation, packets of "extended Teletext" systems had long been used to carry and distribute computer software too. In fact, the term "Telesoftware" had been specifically coined so as to refer to the "software" that was carried by "extended Teletext systems. The point being, that SPAM and Teletext data packets are equivalent right down to their recognized ability to carry other forms of information including "Telesoftware".

³³ Yet a large portion, if not the majority, of the "prior art" cited by applicant pertains to Teletext.

³⁴ SEE: the article "Landmark forms cable weather news network" which is already of record.

bus, to “digital TV monitors” for display thereon. As far as the examiner can tell, the Schwartz et al. disclosure has absolutely nothing to do with the transmission of “digitized TV signals/programming” in any conventional sense of such terminology. Simply trying to figure out how the Schwartz et al. patent might be related to anything that was originally disclosed by applicants in their 1987 disclosure, much less trying to figure out how it might be used to “enable” that which was originally disclosed by applicants in their 1987 disclosure, represents an invitation to experimentation unto itself. If Schwartz et al. was cited out of necessity (e.g. if it actually represents the best showing of his “digital television” recitation that applicant is/was aware of), then its very presence in the record goes to support the examiner’s position that which is now claimed by applicant, i.e. via the subsequently introduced “digital television” recitations, was not supported and/or enabled by applicants’ originally filed 1987 disclosure (much less the 1981 disclosure to which priority is often sought).

10) Applicants have made many attempts to have the Zaboklicki prior art [DE 2,914,981] removed from consideration. In some responses [e.g. the communication filed 7/13/2000 in 08/470,571], applicants have argued that the applied Zaboklicki reference should be removed from consideration simply because the teachings and descriptions provided by this prior art reference differ from teachings and descriptions provided by another non-applied members of its patent family (namely, GB #2,016,874). Such a position is absurd. If Zaboklicki DE 2,914,981 teaches that which applicant now claims, then the fact that Zaboklicki GB #2,016,874 might not have provided these same teachings (even if proven true) is irrelevant to the fact that the claims ARE unpatentable over Zaboklicki DE 2,914,981. ³⁵

11) Within the originally filed abstract of applicants’ 1981 past parent specification (i.e. note S.N. 06/317,510), the term “*programming*” was explicitly defined to mean:

“everything transmitted over television or radio intended for communication of entertainment or to instruct or inform”.

[see lines 4-7 in the abstract of US patent #4,694,490]

³⁵ It is important to note that Zaboklicki [DE 2,914,981] included an extensive “List of References” section that described the operation of the Zaboklicki system element-by-element. This section was absent from Zaboklicki [GB 2,016,874]. This additional description in Zaboklicki [DE 2,914,981] is not trivial in that it goes a long way to understanding the invention which was disclosed in the *applied* Zaboklicki prior art; e.g. namely DE 2,914,981 (not GB 2,016,874).

This definition appears to be in conflict with applicants' present needs (e.g. it goes to refute applicants' claim to the earlier 1981 priority date ³⁶). Being such, applicants have argued that this explicitly stated definition should be ignored and given no weight because it appears in the "abstract" of the 1981 disclosure and, applicant alleges, the abstract was not *technically* part of his 1981 written description. The examiner points out: that the originally filed abstract was most certainly part of the originally filed disclosure of the 1981 parent application on which all issues must be considered/based; and, more importantly, that the definition of "programming" that was provided by this originally filed abstract is simply an explicit statement of the way that "programming" terminology was used throughout the 1981 disclosure. That is, in the context of the 1981 specification itself, the term "programming" was clearly used to refer to scheduled TV or Radio shows.

12) Applicants seem willing to acknowledge that the "inventions" that are described in the instant 1987 CIP specification are, in at least in some ways, "expanded"/"enhanced"/"improved" versions of the "inventions" that were described in applicants' past 1981 parent specification.

"In fact, both [the 1981 and 1987] specifications describe the inventions disclosed in the 1981 specification, although the 1987 specification contains many enhancements and improvements."

[see the last two lines on page 9 of applicant's supplemental response filed 5/6/02 in SN 08/470,571]

One of the "enhancements and improvements" that was effected via the subsequent filing of instant 1987 CIP specification was a change made to the definition of the word "programming." Whereas the past 1981 Parent specification defined the terminology as referring to Television and Radio transmissions, the instant 1987 specification "improved and enhanced" the 1981 definition of "programming" to explicitly cover "all forms of electronic transmission" now explicitly including "computer programming", "broadcast print", etc,... (e.g. additions to the radio/TV transmission of the past 1981 definition).

**"everything that is transmitted over television or radio intended for communication of entertainment or to instruct or inform";
["programming" as defined in the past 1981 Parent specification]**

³⁶ The examiner notes that applicant is only entitled to the 1981 priority date for "common subject matter"; i.e. the "same" subject matter that is commonly found in both the present 1987 and the 1981 parent disclosures as originally filed. However, the term "programming" itself does not represent "common subject matter" required for priority because the definition given to it within the present 1987 disclosure is vastly different than the definition given to it via the 1981 parent. Specifically, whenever the "programming" terminology is used in a currently pending claim, section 112-1 demands that it be held to the definition that is explicitly provided via the present 1987 disclosure. This 1987 definition is not entitled to the 1981 priority date in view that the 1981 disclosure explicitly gave the same terminology a different meaning.

**“everything that is transmitted electronically to entertain, instruct, or inform including television, radio, broadcast print, computer programming, as well as combined medium programming”.
[“programming” as defined in the instant 1987 CIP specification]**

Thus, whereas a member of the public (e.g. a potential infringer) might have reasonably believed that applicants' claims pertain to subject matter within Television and Radio program transmission arts given the 1981 definition of “programming” (e.g. that the claimed invention does not pertain to computer software/programming transmissions), the wiggle room for such a belief/finding has been eliminated when the identically worded claims derive their required section 112-1 support from description that is provided within 1987 CIP specification instead; i.e. being that the 1987 specification replaces the 1981 definition of “programming” with the new “improved and enhanced” 1987 definition of “programming” which has been “expanded” to explicitly covers “all forms of electronic transmission” including, i.e. explicitly, said “computer programming” transmissions.³⁷ Being such, the examiner asks:

Why should any applicant be allowed to improve/enhance/redefine the “substance” of the subject matter that is being recited by a given claim using the new subject matter that was added via a subsequently filed CIP specification, e.g. in order to tighten the noose on potential infringers and/or in order to cast a wider net to ensnare new potential infringers, and yet still be entitled to the earlier filing date of a past unincorporated 1981 Parent specification that did not contain this improved/enhanced/redefined subject matter?

³⁷ The examiner maintains that the differences in the respective 1981 and 1987 definitions of “programming”:

1) represent real differences in the respective “properties” of the different kinds of “signaling” that made up the respective 1987 and 1981 subject matter; and

2) are not simply different statements of “disclosed utilities” as applicant might try to allege in the future.

(e.g. once again, the 1987 SPAM-type signaling subject matter that is necessarily being claimed by the pending claims is explicitly inclusive of “computer software/programming” whereas the 1981 signaling subject matter was not).

The short answer to this question seems to be, "NOT". That is, preventing a patent from being expanding in this manner was precisely the reason why the written description requirement of section 112-1 was incorporated into Section 120 in the first place.

"Unlike the enablement provision of section 112, where the disclosure of a single species might be sufficient to enable a practitioner skilled in the art to make and use any member of the genus,....., the written description requirement of section 112 requires more. See *Vas - Cath, supra*. This strict reading of the written description requirement prevents an inventor from surreptitiously expanding a patent through successive continuation-in-parts. See *id.* At 1562. Essentially, it limits the claims of an applicant to those inventions he clearly discloses, either expressly or inherently" (emphasis added)

[Tronzo v. Biomet Inc. (DC SFla) 41 USPQ2d 1403 ³⁸ citing *Vas-Cath Inc. v. Mahurkar* (CA FC) 19 USPQ2d 1111]

An adequate written description of the invention "guards against the inventor's overreaching by insisting that he recount his invention in such detail that his future claims can be determined to be encompassed within his original creation."

[*Vas-Cath Inc. V. Mahurkar* (CA FC) 19 USPQ2d 1115]

"In 1967, the Court of Custom and Patent Appeals first separated a new written description (WD) requirement from the enablement requirement of [Section] 112. The reason for this new judge-made doctrine needs some explanation. Every patent system must have some provision to prevent applicants from using the amendment process to update their disclosures (claims or specification) during their pendency before the patent office. Otherwise applicants could add new mater to their disclosures and date them back to their original filing date, thus defeating accurate accounting of the priority of invention."

[*Enzo Biochem Inc. v. Gen-Probe Inc.* 63 USPQ2d 1618,1624 (CA FC 2002)]

The point being that applicant had every right to draft a claim based solely on the 1981 subject matter which was described in the context of the 1981 definition of "programming", and to have argued that a fair reading of the 1981 "programming" terminology encompassed "computer programming" transmission too; i.e. wherein such an "argument" would have been necessary in view that the 1981 definition of "programming" did not include "computer programming". Instead, applicant elected to draft a new CIP specification which modified the

³⁸ NOTE: this case was appealed [*Tronzo v. Biomet* (CA FC) 47 USPQ2d 1829]

definition of "programming" to explicitly include "computer programming" thereby eliminating any question that "programming", in the context of the new 1987 CIP, explicitly encompasses "computer programming":

*(E.G. Why do applicants believe that their new 1987 definition of "programming" should be entitled to the 1981 filing date of the old 1981 "programming" definition which it replaced?; Why should applicants' "1987 inventions", which have been **described** in terms of the new 1987 definition of "programming", be entitled to the 1981 filing date of "past 1981 inventions" which were **described** in terms of the lesser 1981 definition of "programming?"; etc,...)*

13) To try to overcome applied prior art of record, applicants have repeatedly alleged that the Radio and Television broadcast arts constitute non-analogous arts. This position is absurd and wholly unsupportable too.³⁹ The examiner points out that the Television broadcast art actually evolved from the Radio broadcast art because the original radio broadcast networks represented existing entities who had the program distribution resources and expertise that was easily extended and applied to TV programming; e.g. NBC, CBS, ABC all began as Radio distribution networks which evolved, quite "naturally", into Television broadcast networks too [NOTE: the last 5 lines of the first paragraph of the first column on page 811 of the article "Versatile Transmission Video Facilities at NBC New York" by Mausler which states that: "the origins of television broadcasting practice may be found in radio" (a copy of which was provided within SN 08/470,571)]. In fact, the most significant difference (i.e. if not the only "real" difference) between Radio and Television distribution networks is the difference in bandwidth of the equipment that is required to handle Radio and Television program signal distributions. Thus, for example, when Hetrich [Australian patent #74,619/ U.S. patent #3,866,123] stated that the disclosed "Netcue" system was applicable to either "a network of radio or television stations", one of ordinary skill in the art would have recognized that this teaching was in fact founded on the underlying understanding that Radio and Television network were analogous arts (i.e. applicants' allegations to the contrary are based on an unrealistically low level of skill in the art).

14) Throughout the prosecution of their vast patent application portfolio, applicants have alleged that the "**simultaneous or sequential presentation**" recitation, as found in many of their pending claims, represents a "key limitation" in overcoming and/or avoiding "prior art" of record [note: lines 2-6 on page 17 of Appendix A in the response filed on 3/19/2001 in SN 08/469,078; and part "4)" under "Section VII" of the Office action mailed 8/27/01 in SN 08/470,571]. The

³⁹ Note that adequacy of applicants' own disclosures, especially that of the 1981 parent, appear to be based on the fact that one would understand that radio and television systems are in fact analogous (i.e. evident in the 1981 definition of "programming" alone).

examiner strongly disagrees. The examiner points out that the alternative expressions "*simultaneous or sequential*" or "*one of a simultaneous and sequential*" simply encompasses ANY AND ALL of the ways by which two types of information could ever be presented to a given audience. Specifically, any time two types of information are presented to a given audience, they must necessarily be presented to that audience either *simultaneously or sequentially* in time. The phrase "*simultaneous or sequential*" simply covers ALL of the possibilities! Thus, if one can show that a given piece of "prior art" operated to present two types of information to a given audience, then one has in fact inherently shown that the prior art meets the "*simultaneous or sequential presentation*" limitation of applicants' claims; i.e. again, the recitation "*simultaneous or sequential*" simply covers ALL of the way that two types of data could ever be displayed to a single audience!

15) Applicants have alleged that their past 1981 Parent specification "implicitly" taught the downloading of "computer programming" (i.e. computer *software*).

"To the contrary, the 1981 definition [of "programming"] implicitly includes, and the 1987 definition [of "programming"] explicitly includes, computer programming in the definition".

"The 1981 specification states:

It is the object of this invention to unlock this potential by the development of means and methods which permit programming to communicate with equipment that is external to television receivers and radio receivers, particularly computers and computer peripherals such as printers

1981 Spec., Col. 1, ll.36-41

Thus applicants' 1981 specification makes it clear that 'programming' is not just TV and Radio shows- It can also include instructions, codes, and signals that are communicated to and control e.g., computers and computer peripherals. These instructions, codes, and signals clearly fall within the definition of programming and to find otherwise is to conveniently and purposefully overlook the entire purpose of the invention." (emphasis added)

[Page 150 of the amendment filed 1/28/2002 in 08/470,571]

The examiner strongly disagrees for reasons that were addressed in Appendix IV of this Office action.

A-84

16) Applicants failed to carry their original 1981 specification forward into the instant 1987 disclosure.⁴⁰ Because of this, applicants have forfeited their right to now claim any of the 1981 subject matter that was set forth in this 1981 disclosure of their originally filed 1981 parent application, but was not carried forward into the 1987 CIP disclosure of their originally filed 1987 parent application.⁴¹ Thus, APPLICANTS ARE CLEARLY WRONG when they alleges that he can secure a 1981 priority date for that which is now claimed by showing "possession" of that which is now claimed via the original disclosure of their 1981 parent application alone (i.e. NOT for the 1981 subject matter that was left behind at the time of filing of the 1987 CIP!). Specifically, not only must applicants show that they possessed the subject matter that is now claimed with respect to the original 1981 disclosure but, more importantly⁴², applicants must first show possession of the same claimed subject matter with respect to the instant 1987 disclosure alone. Stated another way, to secure priority, applicants must be able to show that they did not forfeit their right to claim the subject matter possessed (i.e. *described*) in his originally filed 1981 parent application by showing, *independently*⁴³, that they possessed (i.e. *described*) this same subject matter at the time they filed the instant 1987 CIP specification too; i.e. that a description of this same subject matter had in fact been carried forward.

17) Applicants are only entitled to claim subject matter that was set forth within the originally filed 1987 CIP disclosure of their present application in accordance with ALL of the requirements of section 112-1. Specifically, the examiner refutes applicants' allegations that the original disclosure of his 1981 parent application can be used in place of the instant 1987 disclosure to meet one or more of the section 112-1 requirements (namely, to establish "possession" of that which is now claimed). It is only after proper section 112 support (i.e. including

⁴⁰ The examiner notes that applicant failed to incorporate the original disclosure from his 1981 parent application into the original disclosure of his 1987 parent; i.e. the 1981 disclosure was neither formally copied into the 1987 disclosure nor was the 1981 disclosure "incorporated by reference" into the 1987 disclosure. The original 1987 disclosure simply replaced the 1981 disclosure as "THE INSTANT DISCLOSURE" from which all section 112 issues must be analyzed.

⁴¹ As evidenced by arguments before the ITC (investigation #337-TA-392), even applicant and/or his counsel seemed unsure as to exactly what subject matter from applicants' 1981 parent ("if any") made it into applicants' 1987 disclosure.

⁴² "More important" in the sense that applicants are prohibited from now claiming anything that is not fully supported in accordance with all of the requirements of section 112-1 by the present disclosure (e.g. the disclosure that was originally filed by applicant in 1987). Specifically, the present claims fall under section 112-1 if they are not fully supported by the present 1987 disclosure even if they were, by some chance, fully supported by the disclosure of the earlier 1981 parent.

⁴³ If applicants had formally/properly incorporated the written description from his 1981 parent application into his originally filed 1987 disclosure, then there would be no need for these "independent" showings; i.e. applicants could have established "possession" via the originally filed disclosure of their 1981 application alone. It is only because applicants failed to formally/properly incorporate the written description from his 1981 parent into their originally filed 1987 disclosure, that such "independent" showings of "possession" are needed; i.e. because the actions taken by applicants have in fact caused the forfeiture of their right to now claim that subject matter from their 1981 disclosure which was not carried forward into the 1987 application.

"possession") has first been established for the pending claims from the disclosure of the present application (the 1987 disclosure), that there is even a need to consider applicants' 1981 parent application at all. Simply put, if the pending claims are not supported under section 112-1 by applicants present disclosure as originally filed, then the pending claims themselves fail to comply with the requirements of section 112-1 and no further questions need be asked.⁴⁴

18) As was noted above, applicants do not believe that "common subject matter" is a requirement for priority under section 120.

"[Section] 120 does not require an applicant to demonstrate that the disclosures relied upon under §120 have anything in common besides their ability to separately comply with §112-1 with respect to the claims for which priority is sought. Accordingly, the Examiner's focus on comparing the support from the two applications for similarity or common subject matter is improper and irrelevant because all applicants are required to do is satisfy §120 is show that each disclosure meets the requirements of §112-1 for a given claim." (emphasis added)

[Page 141 of applicants' response filed on 1/28/2002 in application S.N. 08/470,571]

"Accordingly, the law requires a two part test in which the applicant separately demonstrates § 112 support for each application. In the FOA, the examiner distorts this straightforward test by imposing a third element of the test whereby the § 112 support from each application consists of 'common subject matter.'"

[see the last 10 lines on page 137 of the response filed on 1/28/2002 in SN 08/470,571].

Being such, applicants do not even pretend/contend that the subject matter that is now being claimed in his many applications represents "common subject matter" that exists between the instant 1987 CIP specification and the past 1981 parent specification. Instead, applicants are content to allege the benefit of section 120 priority for that which is claimed based only on alleged "correlated subject matter" between his 1987 and 1981 specifications; e.g. NOTE:

a) That Appendix C of applicants' response filed 6/7/2000 in 08/470,571 sets forth alleged "correlations" between respective 1981 and 1987 disclosures; and

b) That the claim by claim showing of alleged 1981 and 1987 section 112 claim support in Appendix A of applicants' response filed 6/7/2000 seem to regurgitate many of the alleged "correlations".

⁴⁴ At least with respect to the issue of "adequate written description".

The examiner, on the other hand, maintains that "common subject matter" is a requirement of section 120. Thus, the examiner maintains that applicants' allegations pertaining to the existence of "correlated subject matter" are irrelevant to the issue of section 120 priority because "common subject matter", not "correlated subject matter", is required under section 120. As noted above, it appears that applicants have confused the "anticipation" requirement of section 102 with the adequate written description requirement of section 112-1; wherein it is the requirements of section 112-1, and not of section 102, that have been literally incorporated into section 120.

An extreme example of just how far applicants have distorted section 120 in an effort to obtain the 1981 priority date for ones of the pending amended claims can be found in the claim chart for claim 123 within APPENDIX A of applicants' response filed 6/7/2000 in SN 08/470,571. In this claim chart, applicant alleges that the recitations of claim 123 find section 112-1 support via the "Super Discount Supermarkets" embodiment of the instant 1987 CIP disclosure while alleging that this claimed 1987 "Super Discount Supermarkets" embodiment is entitled to the 1981 filing date of the parent application based on the 1981 "Wall Street Week" embodiment. The examiner disagrees. Specifically, the examiner maintains that the 1987 "Super Discount Supermarkets" embodiment and the 1981 "Wall Street Week" embodiment do not constitute "common subject matter" and therefore the claimed 1987 "Super Discount Supermarkets" embodiment is not entitled to the 1981 filing date of the 1981 "Wall Street Week" embodiment as alleged.

19) In lines 3-7 on page 11 of the supplemental response filed 5/06/2002 in SN 08/470,571, applicants state:

"[T]he starting point for determining whether an applicant is entitled to priority under section 120 is what is being claimed. Without identifying precisely what is being claimed, it is impossible to seriously undertake an analysis of whether sufficient support exists in both applications thus entitling applicants to a 1981 priority date." ⁴⁵

The examiner agrees. However, the examiner is surprised that applicants raise this issue after all of the section 112-1 requests which have been made by the Office throughout the present prosecution of applicants' 328 bulk filed applications in hopes of getting applicants' clarification as to *precisely what it is* that applicants are now claiming. In fact, the Office has continued to struggle in its efforts to make such determinations for the 10,000 or so pending/amended

⁴⁵ The examiner agrees with applicants' position noting that, without being able to identify precisely what it is that is being claimed, it is impossible to seriously undertake many other examining related activities too.

claims that exist before it. In the past, when applicants were asked to identify *"precisely what is being claimed"*, applicant declined ⁴⁶ to provide such showings instead opting to take the positions:

A) That it is the examiners job, not applicants', to read and understand the 557 pages of applicants' current 1987 CIP specification in order to determine "precisely what it is being claimed" via applicants' 10,000 or so pending claims; and

B) That at least some of the limitations of applicants' 10,000 or so pending claims may be directed to subject matter that is not described within in the instant 1987 CIP specification.

"the [examiner's] assumption that 'all limitations of the currently pending claims are necessarily directed to that which is described in the present 1987 disclosure' is mistaken and wholly unsupported." ⁴⁷

[lines 8-10 on page 144 of the amendment filed in 08/470,571 on 1/28/2002].

Hence applicant does not wish to cite, or perhaps is unable to cite, section 112-1 support from the instant CIP disclosure for the claim limitations [e.g. in at least one instance, out of an expressed a fear that a court, at some later date, might actually hold the scope/meaning of his claims' limitations to the so identified subject matter].

In regard to this section 112-1 issue raised by applicants' argument, the examiner continues to take the following positions:

A) It has always been a desire of the examiner/PTO to determine "precisely what it is" that applicants now claim. Being that it remains unclear as to "precisely what it is" that applicants now claims, clarification on the part of applicants is once again formally requested for all of the 10,000 or so pending/amended claims. For the record, the examiner notes that he has found applicants' claim charts of alleged "dual" section 112-1 support to be the most helpful form of aid that applicant has provided to date because it at least attempts to match each claimed

⁴⁶ A notable exception being the most helpful claim charts of alleged "dual" section 112 support which applicant has, only on a few occasions, been willing to kindly provide [e.g. APPENDIX A in the amendment filed 6/7/2000 in 08/470,571].

⁴⁷ Contrary to applicants' position, the examiner maintains that a pending claim must necessarily be directed to, and supported by, that which is described in the instant 1987 specification. This is not to say that the resulting scope of the pending claims is limited only to that of the 1987 specification to which it must necessarily be directed.

limitation to the specific teachings in the specification(s) that they are allegedly directed;⁴⁸ and

B) The examiner adopts observations/positions expressed by Judge Luckern and/or the ITC:

1) "that the specification of the '277 patent [the 557 pages of the instant 1987 specification] is difficult to understand, as it is dealing with many possible systems";

2) "that despite complainant's [i.e. the current applicants] attempts to point to the specification of the '277 patent [the 557 pages of the instant 1987 specification] as illustrative of some claim elements, said specification has not been helpful in connecting individual claim language to distinct statements in the specification of the '277 patent that is supposed to provide an explanation of the claimed systems in issue";

3) "that complainant's [i.e. the current applicants] assertions in many instances of where support in the specification of the '277 patent [the 557 pages of the instant 1987 specification] can be found for claimed elements 'reads like the directions to a treasure hunt. There's a piece here, there's a piece there, it's in there somewhere.'"; and

4) " that the specification of the '277 patent [the 557 pages of the instant 1987 specification] and the claims in issue 'are like ships passing in the night in the same ocean, but not necessarily sailing in the same direction."

[SEE: 1997 ITC Lexis 307, *258 (part I of II)]

Once again, the examiner hereby requests applicants' help in determining "precisely what it is" that applicants now claims.

20) The examiner notes that the "SPAM" technology, on which the "more sophisticated" systems of applicants' present 1987 disclosure are based, is vastly different from the "cuing-type signal" technology on which the "primitive" systems of applicants' 1981 parent application were based; e.g. the ability of SPAM to carry and distribute "software" being but just one of the more notable differences. Clearly, the "more sophisticated" 1987 alleged inventions and

⁴⁸ The process of showing a limitation-to-disclosure match for each limitation of each claim should be an easy task for applicant, if not a trivial one, being that the currently pending claims must be "*clearly/unambiguously described*" by applicant's instant disclosure.

signaling that are now *necessarily being claimed* are not entitled to the 1981 filing date of their 1981 "primitive" ancestors; i.e. applicants are not allowed to transport their "more sophisticated" 1987 alleged inventions back in time to the 1981 filing date of his different, albeit sometimes "correlated", "primitive" 1981 alleged inventions. Only claims which recite "common subject matter", subject matter that can be identified by applicants within both specifications, is entitled to the 1981 effective filing date.

21) Judge Rich has taken the position that "continuity of disclosure", needed to establish the benefit of priority under section 120, requires continuity of "common subject matter" in a form that meets all of the requirements of section 112-1; e.g. even continuity of "best mode".

"It must be understood that the introduction of a new best mode disclosure would constitute the injection of 'new matter' into the application and automatically deprive the applicant of the benefit of the earlier filing date of the parent or original application for any claim whose validity rests on the new best mode disclosure".
TRANSCO [38 F.3d 551; 32 U.S.P.Q.2D (BNA) 1077]

This Judge's position is NOT consistent with applicants' position that section 120 does not require "common subject matter" between applications; further evidencing the fact that applicants seem to have confused the issue of "anticipation" under section 102 which the requirements of section 112-1 that have been incorporated into section 120.

[The "best mode" issue under section 120 has been raised by the examiner only to show a further inconsistency that exists between applicants' position concerning the requirements of section 120 priority, and positions that have been held by the courts. The examiner has not, and never intends, to make a rejection under "best mode". In fact, it is the examiner's belief that the "best mode" was disclosed by applicants in each of their 1981 and 1987 disclosures. The problem is that the "best mode" of the 1987 disclosure may differ from the best mode of the 1981 disclosure (e.g. 1987 SPAM signaling v. 1981 trigger signals). To the extent that this is true, if at all, as noted by Judge Rich such alone is enough to deprive applicants' current claims of the 1981 priority date; i.e. again, further refuting the "anticipation" standard of claim that continues to be argued by applicants (see appendix I of this Office action)].

22) It is understood that CIP practice, when properly utilized, allows an applicant to file a new application containing additional/new subject matter while preserving the applicants' right to claim (and the right to the earlier filing date for) subject matter which was previously disclosed in the parent application. But an applicants' right to claim subject matter from the parent application is only preserved for that subject matter of the parent application that has actually been

carried forward (e.g. *incorporated*) into the disclosure of the CIP. Any and all subject matter from the parent application that is not carried forward into the disclosure of the CIP cannot be legally claimed within said CIP; i.e. the right to claim subject matter that is left behind is lost/forfeited with respect to said CIP application. To prevent such a loss/forfeiture, it is customary for an applicant to draft the disclosure of his CIP application in a manner that it literally incorporates the entire disclosure of the parent application, e.g. either physically or "by reference", thereby literally carrying forward all of the subject matter from the parent application into the CIP application and, in doing so,:

- A) Preserving applicants' right to claim any/all of the subject matter from the parent within said CIP application; and
- B) Preserving applicants' right to the filing date of the parent application for any/all claims that are directed to the subject matter of the parent application that has been carried forward into the CIP application.

In contrast to the customary CIP practice described above, when filing their 1987 CIP disclosure, the present applicants elected to draft an entirely new 1987 specification and elected not to formally incorporate the 1981 disclosure from their 1981 parent application in its entirety. In fact, when filing their 1987 CIP disclosure, applicants elected to draft the entirely new specification in a way which makes it difficult to impossible to determine what, if any, of the subject matter from the 1981 parent specification was carried forward into the disclosure of the 1987 CIP ⁴⁹. Today, faced with the fact that 1981 subject matter which was not carried forward (i.e. *incorporated*) into the present disclosure has been lost/forfeited, applicants takes a leap of faith and suggest that all of the subject matter from their 1981 parent application somehow/miraculously found its way into the new disclosure of the 1987 CIP. Clearly, this does not appear to be true. For example, even the subject matter from the two disclosures which looks similar at first glance, is based on vastly different transmission technologies, vastly different terminology/definitions, etc,... [e.g. note Appendix I and Appendix III of this Office action].

23) The examiner notes that many of applicants' pending claims recite the following receiving station structures: a) a receiver; b) a signal detector; c) a processor; and d) an output device. Appendix A of the response filed on 6/7/2000 in SN 08/470,571 shows that:

- a) The recited "receiver" refers to nothing more that --a TV tuner--;

⁴⁹ For example, to the extent that the 1987 CIP has injected a "new best mode disclosure" by literally replacing the 1981 inventions with new 1987 inventions which are based on a more sophisticated technology (i.e. SPAM), applicants' claim to priority of the 1981 filing date is refuted (i.e. in the words of Judge Rich).

b) The recited "signal detector" refers to nothing more than a decoder 203 which extracts and error corrects embedded information from the VBI of TV programming;

c) The recited "processor" refers to nothing more than microcomputer 205; and

d) The recited "output device" refers to nothing more than a "TV monitor".

The examiner maintains that all of these recited structures are found within a conventional CPU/MP/computer implemented Teletext receivers. For example, note:

a) The TV tuning element (2);

b) The extracting and decoding circuitry 8 and 11;

c) The processing element (13); and

d) The TV monitor/display (6), of BETTS [GB 1,556,366].

Such further highlights the direct correlation that exists between the "SPAM" distribution system of applicants' alleged invention and the "Teletext" distribution systems of the "prior art". Again, the examiner believes that applicants' "SPAM" is, for all intents and purposes, synonymous with conventional "Extended Teletext" [note part "5)" of this appendix];

24) Applicants' originally filed instant disclosure clearly taught away from the "interactive" ultimate receiver station configuration that has been claimed during the present prosecution [note claim 56 as presented in the amendment filed 6/7/2000 and 7/13/2000 in 08/470,571]. Namely, as originally described, one of the key advantages that was allegedly offered by applicants' alleged inventions was the fact that the "ultimate receiver stations" produced their respective personalized audio/video presentation "automatically" and without any manual input from the viewer; e.g. whereby the complex processing that was involved within the system remained hidden from, and transparent to, the viewer/user. SEE:

A) Lines 27-34 on page 11 of applicants' instant disclosure as originally filed;

B) Lines 18-20 on page 91 of applicants' instant disclosure as originally filed;

C) Lines 13-34 on page 427 of applicants' instant disclosure as originally filed;

D) etc,...

Despite this original teaching, applicants have attempted to introduce pending amended claims into the record that, according to applicants' own allegation (see the support for claim 56 as was set forth in APPENDIX A of the amendment filed on 6/7/2000 in SN 08/470,571), recite an "interactive" implementation of the originally disclosed non-interactive "ultimate receiver stations". The section 112-1 problem is immediately apparent [this issue has been addressed in detail in sections II and VI of the Office action mailed 7/17/2002 in SN 08/470,571].

25) As originally described, it appears that the "ultimate receiver stations" of applicants' alleged invention produced the combined image of applicants' figure 1C by (apparently) additively mixing the images of figures 1A and 1B in their entirety; i.e. this fact seems to explain why the "line" of figure 1A had to be produced "on a background color that is transparent when overlaid on a separate video image" as was described in applicants' originally filed disclosure [see lines 9-14 on page 25 of applicants' instant disclosure]. Despite this original teaching, applicant has attempted to introduce claims which explicitly recite processes in which the respective images are combined in less than their entirety and/or in which one portion of one image is "replaced" by a portion of another (i.e. known in the art as "keying" or "non-additive mixing". The section 112-1 problem is immediately apparent [this issue has been addressed in detail in section VI of the Office action mailed 7/17/2002 in SN 08/470,571].

26) In the first two lines under the heading "*a. Independent Claim 56 and Dependent Claims Thereto*" on page 287 of the response filed 1/28/2002 in SN 08/470,571, applicants allege that the publication date of the applied Gunn et al article was never established by the Office. This allegation is untrue. The following is noted:

a) This Gunn et al. article was originally submitted by applicants for consideration within voluminous IDS citations. However, as with many of these citations, applicants never provided the Office with information regarding the publication date of the article;

b) The Gunn et al. article has been applied by the Office against many of applicants' pending claims, and while applicant never provided the Office with the article's publication date, using a commercial database the Office was able to establish the date in question and notified applicant of it

accordingly [note: the PTO- 892 of paper #2 in the present 08/470,571 record; the PTO-892 of paper #20 in SN 08/447,502; etc,...];

c) Again, the publication date for this Gunn et al. article, e.g. an article that was submitted by applicant for consideration against the pending amended claims, is March 26-28 of 1980. This date is, by any standard, valid "prior art" against all of applicants' pending claims.

27) In the first four lines on page 15 of the supplemental response filed 5/6/2002 in 08/470,571, applicants state:

"applicants further questioned [the examiner as to] why it would be necessary to incorporate the parent disclosure, by reference or in full-text format, if the subject matter of the parent application *is properly disclosed* in the CIP application in an integrated manner with the enhancements and improvements of the CIP application." (emphasis added)

That depends on what applicants mean by "*properly disclosed*." According to applicants, "*properly disclosed*" does not require that the claims be supported by "common subject matter" found in both applications.

"[Section] 120 does not require an applicant to demonstrate that the disclosures relied upon under §120 have anything in common besides their ability to separately comply with §112-1 with respect to the claims for which priority is sought. Accordingly, the Examiner's focus on comparing the support from the two applications for similarity or common subject matter is improper and irrelevant because all applicants are required to do is satisfy §120 is show that each disclosure meets the requirements of §112-1 for a given claim."

(emphasis added)

[Page 141 of applicant's response filed on 1/28/2002 in application S.N. 08/470,571]

In contrast, the examiner maintains that "*properly disclosed*" requires continuity of "common subject matter" between applications for that which is claimed. Being such, if there is any way by which current applicant can use the section 112-1 support that is actually available in the instant 1987 CIP disclosure to "properly" show that the currently pending claims are in fact directed "solely" to 1981 subject matter previously described in the past 1981 Parent specification, i.e. "common subject matter", then section 120 priority would be a "*given*". To date, applicant has been unable to provide such a showing.⁵⁰

⁵⁰ This is not a situation in which the "wording" that was used to described "common subject matter" has simply been changed between applications as applicant would now try to have one believe [note lines 7-11 on page 15 of the supplemental response filed in 08/470,571 on 5/6/02]. Instead, it is a situation in which "1981 inventions" from the 1981 specification were left

Here, it is important to note that a direct path to such a "*proper*" showing would have been available to the current applicants had the *unenanced/unimproved* subject matter from the past 1981 specification *actually* been incorporated into the instant specification in a distinct and discernible fashion. This is, in essence, the answer to the question that has been asked by applicants.

"applicants further questioned why it would be necessary to incorporate the parent disclosure, by reference or in full-text format"

[the first four lines on page 15 of the supplemental response filed 5/6/2002 in 08/470,571]

Specifically, any applicant wishing to draft a claim in a later filed CIP application that is going to be directed *solely* to "subject matter" found in an earlier filed Parent application, e.g. thereby allowing the drafted claim to obtain the benefit of section 120 priority, would be wise to incorporate said "subject matter" from the parent application into the CIP specification in a clear and undisputable fashion. Incorporating the Parent specification by reference, or by literally carrying it forward in a substantially identical "full-text format", are methods that are commonly used by applicants for this purpose. And, for obvious reasons, the need to "incorporate" the parent's subject matter in a clear and undisputable fashion seems especially true/"necessary" if the "subject matter" of the past parent disclosure is going to be extensively "re-worded", "enhanced", "improved" and "scattered" throughout vast quantities of new subject matter during its alleged migration to the specification of a subsequently filed CIP specification.

28) Section 112-1 requires the written description to provide a description of that which is claimed. For the reasons addressed herein (e.g. the noted inconsistencies between the 1981 and the 1987 specifications), that which is described in the 557 pages of the instant 1987 CIP disclosure is very different from that which was previously described in the 44 pages of the 1981 parent. For example, the "systems and methods" that are described in the 1987 disclosure all utilize a new, more advanced, "SPAM" transmission technology which enables the 1987 systems and methods to carry a wider/broader range of control and instruct signaling (i.e. such as "software") and which also enables the 1987 systems and methods to be applied to a much wider/broader range of communication environments (i.e. the 1987 systems and methods, as described, explicitly encompass application outside the radio/TV environments explicitly described for the 1981 systems and methods):

behind at the time of filing the instant 1987 CIP specification in favor of the enhanced/improved/expanded "1987 inventions" which are actually described within the instant 1987 CIP disclosure; a fact that is clearly self-evident whenever applicant attempts to specifically demonstrate "dual" 1987 and 1981 section 112-1 for that which is claimed [e.g. as is exemplified via Appendix A of the amendment filed 6/7/2000 in 08/470,571].

“A continuation-in-part application is not entitled to the benefit of the earlier filing date of its parent application where the changes included within subsequent applications are ‘new matter’ which either alters the substance of the invention or makes the composition an invention for the first time, as opposed to the situation in which the subsequent application merely contains either a language change not effecting the meaning of the prior application or a specification which narrows the scope of that which was previously claimed. [Indiana General Corp. v. Krystinel Corp., 161 USPQ 82, 94-95]

And, because the disclosure of the 1981 was left behind by applicant's during the drafting of the 1987 CIP, it is the written description of the 1987 CIP systems and methods alone which must provide the description of the systems and methods that are now being claimed as required under section 112-1; i.e. that which is claimed necessarily being the much improved/enhanced/expanded systems/methods of the 1987 CIP specification. Why should/would these described/claimed enhanced/improved 1987 CIP systems and methods be entitled to the 1981 filing date of the lesser 1981 systems and methods that were previously described in the 1981 parent specification that was literally left behind (abandoned) during the drafting of the instant 1987 CIP specification? By abandoning the 1981 specification (leaving it behind during the drafting of the 1987 CIP), it is difficult if not impossible for applicants to alleged that that which is now claimed is directed solely to the systems and methods that were previously described in the abandoned specification of the 1981 parent (i.e. that the current claims are directed to “common subject matter”).

The current fact pattern seems akin to situations in which a courts have held that an applicant was not entitled to “priority” based on the applicant's foreign filed application because said foreign filed application did not describe “the same invention” yet, at the same time, affirming a rejection of “anticipation” under section 102 of the same claims based on the same foreign filed application [e.g. In re van Langenhoven, CCPA 173 USPQ 426]. That is, such case law underscores the fact that there is a very “real” difference between the requirements of 112-1 that must be met for establishing “priority” to an earlier filed application and the requirement of section 102 needed for establishing “anticipation”. Namely, the fact that the current applicants' claims might be shown to be “anticipated” by different subject matter from applicants' 1987 CIP and 1981 specifications using the standard of “anticipation” provided for under section 102, is insufficient (even if true) to establish priority under section 120 unless that which is described in the respective 1981 and 1987 CIP disclosures can be shown to be “the same”/“common subject matter”.

29) Applicants take the position that they are allowed to use the “new subject matter” that is contained only within the instant 1987 CIP specification to fulfil the

section 112-1 requirement for their pending claims and yet still obtain the earlier 1981 filing date of the 1981 Parent specification for these claims by alleging that some underlying principle or teaching from the 1981 specification is buried/embedded/hidden somewhere within the cited "new subject matter".

"The fact that the [section 112-1] support [that applicant] identified in the 1987 specification for a certain [claimed] features (or limitation) also happens to include additional features or details relating to the same underlying feature (or limitation) disclosed in the 1981 specification , does not mean that both specifications do not support the feature or limitation with similar and valid 'common subject matter' support." ⁵¹

[lines 5-8 on page 10 of the supplemental response]

Here, applicants seem to suggest that it is "solely" the alleged "underlying features" from the 1981 disclosure that are being claimed by the pending claims' recited limitations, even though the passages from the instant 1987 specification that must be cited by applicant, for the expressed purpose of providing the required section 112-1 support for the claims' limitations, necessarily comprise new/added 1987 subject matter that was introduced via the filing of the 1987 CIP specification. Apparently, it is applicants' position that the added/new 1987 subject matter contained within applicants' own citations of alleged section 112-1 support should be weeded out, discarded and/or ignored under section 120 in order to allow the alleged underlying principles, ones that were allegedly carried forward from the past 1981 parent specification, to emerge therefrom (thereby allowing applicants' subsequently filed CIP claims to obtain the earlier 1981 filing date of the parent application).

That is, applicants' position seems to suggest that it is proper for a claim to have two different claim constructions: i.e. A first all encompassing claim "construction" that is obtained when the claim is constructed/construed based on a full reading of the instant 1987 CIP specification; and, A second claim "construction" that is obtained when the claim is constructed/construed in light of different and lesser teachings of the discarded 1981 parent specification. The examiner thinks not.

30) In lines 16-19 on page 15 of the supplemental amendment filed 5/6/2002 in 08/470,571, applicant alleges:

"that incorporating the parent [specification], either by reference or in full-text format, into a CIP application that disclosed the subject matter

⁵¹ The examiner notes that the fact applicant is relying on the new "enhanced/improved" subject from his 1987 CIP to provide section 112-1 support for the claim is self-evident whenever applicant attempts to specifically show the alleged "dual" section 112-1 support for a given claim's limitations via the different specifications [e.g. as is exemplified via Appendix A of the amendment filed 6/7/2000 in 08/470,571]

of the parent in an integrated fashion does nothing more than add unnecessary duplicative content to the CIP application."

The examiner notes the following:

1) If applicant is suggesting that this is the situation that currently exists between his instant 1987 CIP specification and his past 1981 Parent specification, then the examiner suggests that applicant make the attempt to formally incorporate his past 1981 parent specification into his current 1987 CIP specification either by reference or in said full-text format in order to resolve the priority issue once and for all. Applicant is, however, put on notice that any attempt to amend the instant 1987 CIP specification in such a fashion will be vigorously objected to as introducing "NEW MATTER"; and

2) Given the present situation, having added a single sentence to the 557 pages of text that comprise the 1987 CIP specification, stating that the 44 page specification of the past 1981 Parent application had been "Incorporated by Reference", hardly seems to fall within the realm of "add[ing] unnecessary duplicative content to the CIP application."

31) In lines 19-22 on page 15 of the supplemental amendment filed 5/6/2002 in 08/470,571, applicants allege:

"applicants' have established in their prior submissions that all of the fundamental teachings of the 1981 disclosure were carried forward to the CIP application, albeit in an integrated fashion with many enhancements and improvements of the CIP application."

The current examiner knows of no prior submission or submissions made by applicants which has "established", as fact, that *that* which is now claimed by applicants' currently pending amended claims is directed "solely" to "fundamental teachings" from applicants' past 1981 Parent disclosure which have been carried forward to the instant 1987 CIP specification. In fact, attempts made by applicant to specifically identify the required section 112-1 support for the limitations of currently pending amended claims have instead "established", as fact, that *that* which is now claimed actually comprises ones the "many enhancements and improvements of the CIP application" that are not entitled to "priority" under section 120.

32) In lines 9-12 on page 10 of the supplemental response filed 5/06/2002 in SN 08/470,571, applicants' state:

"The mere presence of the additional details and enhancement in the 1987 specification does not deprive applicants' of the 1981 priority date unless the claim limitation or feature is only supported by such additional details and enhancements which are not found in the 1981 specification."

See Kennecot, 835 F.2d at 1422. (Emphasis added)

[Lines 9-12 on page 10 of applicant's supplemental response filed 5/6/02]

It is not clear how the cited case law, e.g. *Kennecot*, 835 F.2d at 1422, supports applicants' apparent position that a claim in a continuation-in-part application is entitled to the earlier filing date of a past parent application if only part of its required section 112-1 support comes from "new CIP subject matter" that was introduced via the filing of a CIP specification. This again suggests a situation in which a given claim has two claim construction and two effective filing dates, whereby an examiner could/should reject that portion of a pending claim's scope which is allegedly supported by the "New Matter" of a CIP via valid intervening "prior art" while, at the same time, allowing that portion of the same pending claim's "scope" that is directed "solely" to the subject matter of the Parent application to issue as a patent. Such a position does not make sense.

To the contrary, by claiming the benefit of section 120 priority for a given claim filed in a subsequently filed CIP application, an applicant is in essence "*pledging*" (e.g. putting everyone on notice) that the claim is directed "solely" to subject matter found within the specification of the Parent application, and not to "new subject matter" that has been introduced via the subsequently filed CIP; i.e. that the respective descriptions being relied upon for section 112 support under section 120 are in fact legal equivalents.⁵²

However, such a "pledge" must be supported by the CIP specification from which the claim depends. Namely, if a claim in a CIP application is going to be directed "solely" to the subject matter of a past parent application, then said subject matter of the past parent application must exist within said CIP specification being that the required section 112-1 support for the claim must necessarily come from the instant CIP disclosure. Thus, the subject matter of the parent that one wishes to claim must be carried forward from the parent specification into the CIP specification; i.e. hence the requirement of "common subject matter". However, given the current state of applicants' instant 1987 CIP specification,

⁵² That is, to determine what is being claimed, one turns to that which was "described" in CIP application. If that which is described in the CIP was in fact described in the parent application too (i.e. *common subject matter*), priority under section 120 is established.

e.g. one in which past 1981 subject matter has been (at best) inseparably blended/expanded with subsequently added new 1987 subject matter, it is difficult to determine what part of the past 1981 subject matter, if any, has been carried forward into the instant CIP disclosure. It is improper for one to simply allege/assert that the currently pending claim is somehow more limited than the 1987 CIP disclosure from which it depends (i.e. from which section 112-1 support is derived).

"The fact that the [section 112-1] support [that applicant] identified in the 1987 specification for a certain [claimed] features (or limitation) also happens to include additional features or details relating to the same underlying feature (or limitation) disclosed in the 1981 specification, does not mean that both specifications do not support the feature or limitation with similar and valid 'common subject matter' support."

[lines 5-8 on page 10 of the supplemental response]

Again, why should a pending claim having limitations that are necessarily directed to (supported under section 112-1 by) even a smudge of new 1987 subject matter be entitled to the earlier 1981 filing date of the Parent specification which did not disclose that smudge of new 1987 subject matter?

"However, as mentioned earlier, a continuing application is entitled to rely on the earlier filing date of an earlier application only with respect to subject matter common to both applications" (emphasis added)

[In *Transco Products, Inc., v. Performance Contracting, Inc.*, 32 USPQ2d 1077 (**18)]

"Any claim in a continuation-in-part application that is directed solely to subject matter adequately disclosed under 35 U.S.C. 112 in the parent application is entitled to the filing date of the parent application."

[In *Transco Products, Inc., v. Performance Contracting, Inc.*, 32 USPQ2d 1077 (**18)]

"A continuation-in-part application is not entitled to the benefit of the earlier filing date of its parent application where the changes included within subsequent applications are 'new matter' which either alters the substance of the invention or makes the composition an invention for the first time, as opposed to the situation in which the subsequent application merely contains either a language change not effecting the meaning of the prior application or a specification which narrows the scope of that which was previously claimed. [Indiana General Corp. v. Krystinel Corp., 161 USPQ 82, 94-95]

33) Applicants have suggested that the notoriously well known "mixed" display mode of the videotext prior art pertains only to the display of broadcasted teletext data, and not to the display of telephone supplied Viewdata [e.g. note lines 4-23 on page 105 of the response filed 1/9/2003 in 08/470,571]. Applicants' position is erroneous. In this regard, the following "prior art" has been cited/noted:

- Lines 19-23 on page 2, lines 1-3 on page 12, and lines 1-4 on page 11 of the translation of JP 55-045248 to Tsuboka et al.;
- Lines 38-53 in column 2 and lines 40-45 in column 4 of U.S. Patent #4,233,628 to Ciciora; and
- Figures 1 and 4 and the last 3 lines on page 356 of the 1979 IEEE publication entitled "Telex/Viewdata LSI" by Harden.

.....

x

APPENDIX VII: ["standardized" Teletext (exemplified)]

3/26/81

UK TELETEXT SYSTEM

525 LINE 60 FIELD SYSTEMS APPLICATIONS

The characteristics of broadcast signals according to the UK Teletext System are defined in the form of a set of decoder response levels. Some features are common to all levels and other features apply optionally.

Decoders responding at level 1 provide a set of 96 alphanumeric characters and two sets of mosaic graphic characters, these latter including 32 alphanumeric characters. A full range of serial display attributes, that include seven display colours are available.

Optional features applicable to all levels include the designation of linked pages for automatic storage and a page confidence check. Further optional features are the designation of an initial page to be selected automatically at switch-on and information related to equipment control rather than display. It is envisaged that this data would apply to a Television Network or Channel generally and not only to the teletext service.

Decoders responding at level 2 include the full ISO character repertoire, additional serial and the full range of parallel attributes. Off text area display attributes are defined on a full screen and full row basis. Means are provided to redefine the national option characters in the primary character set on a page or magazine basis. A smoothed mosaic graphics set and a large range of pastel colours are included.

Level 3 introduces Dynamically Redefinable Character Sets (DRCS) and associated redefinable display colours from a very large range. Such down loaded character sets may be used to extend the character sets of level 2 or to display a complete page.

Page addresses are reserved for levels 4 and 5 that employ respectively alphageometric and alphaphotographic coding. These levels will be fully defined when agreement concerning the coding procedures has been achieved.

Page addresses have also been reserved for the transmission of Telesoftware. This concept includes computer programmes and similar data not for direct display.

CONTENTS

<u>Sections</u>	1. to 10.	Characteristics applicable to all levels.
	11.	Response of decoders at level 1.
	12. & 13	Optional features applicable to all levels.
	14.	Response of decoders at level 2.
	15. & 16	Response of decoders at level 3.
	17.	Response of decoders at level 4.
	18.	Response of decoders at level 5.
	19.	Telesoftware.

UK TELETEXT SYSTEM
525 LINE 60 FIELD SYSTEM M APPLICATION

Characteristics of Broadcast Signals

1. TV Lines Usable as Data Lines	Subject to availability.
1.1. When Multiplexed with a TV Picture Signal	Lines 10 to 16 of both fields.
1.2. When Not Multiplexed With a TV Picture Signal	Any, except field sync and equalising pulse periods. See also Section 13.2.2.
2. Data Identification	Clock Run-in and Framing Code in appropriate time slot, see section 9.
3. Signalling Method	Binary NRZ.
4. Signal Levels 0 level 1 level	Nominal Values currently proposed: Black level +2% 70(+6)% of the difference between black level and peak white level.
5. Bit Rate	Currently proposed value: 364 x nominal fH, 8/5 x FSc (5.727272 Mbits/s)
6. Data Timing Reference Point	Peak level of penultimate 1 of clock run-in.
7. Spectrum of Data Pulse	Skew symmetrical about 0.5 x bit rate, substantially zero by 4.2 MHz.
8. Data Line Content	290 bits as 37 bytes of 8 bits each.
9. Synchronism	See figure 1.
9.1. Clock Run-in (bit sync)	Bytes 1 & 2, begins 10101010....even parity.
9.2. Framing Code (byte sync)	Byte 3, 11100100, even parity.
10. Addressing	See figures 1 and 2.
10.1. Packet Numbers in Form X/T/Y For All Data Lines.	Bytes 4 & 5 Hamming protected. <u>2 binary digits</u> for magazine number X <u>1 binary digit</u> for tabulation T, 0 corresponds left hand side of display and 1 corresponds to right hand side of display. <u>5 binary digits</u> for display row number Y. 256 unique packets available.
10.2. Page Header Data Lines	Packet numbers X/0/0
10.2.1. Page Number	Bytes 6 & 7 Hamming protected, 256 available.
10.2.2. Page Sub-Code	Bytes 8, 9, 10, 11 Hamming protected, 8192 available. Byte 9, bit 8 is control bit C4 and byte 11 bits 6 and 8 are respectively control bits C5 and C6, see Section 11.

A-104
A-107

11. Response of Decoder at Level 1

Decoder responds to:

a) Packet numbers X/0/0 to X/T/23.

See Note below.

b) Pages 00 to 99 coded BCD.

c) 3200 Page Sub-Codes. The four digits of the Page Sub-Code can take values in the ranges 0 to 3, 0 to 9, 0 to 7 and 0 to 9, respectively.

d) optionally packet numbers X/T/27 (and the contents of packet number X/T/24 and X/T/25) and packet number 4/1/30.

11.1. Control Bits in Page Header

Active on being set to 1. C4 to C14, bytes 12 and 13 contain C7 to C14 Hamming protected, see Section 10.2.2. for C4 to C6.

11.1.1. C4 Erase Page

Always followed by a 16ms interval before transmission of further data.

11.1.2. C5 News Flash

All information to be boxed.

11.1.3. C6 Sub-Title Page

All information to be boxed.

11.1.4. C7 Suppress Header

Header to be suppressed (display of clock time optional).

11.1.5. C8 Update Indicator

Following data may be limited to include only the updated part of the page.

11.1.6. C9 Interrupted Sequence

Associated page is not in numerical order of page sequence.

11.1.7. C10 Inhibit Display

Data not to be displayed

11.1.8. C11 Magazine Serial

Magazines transmitted one at a time in sequence

11.1.9. C12, C13, C14 Basic Character Set Select.

No response.

11.2. Page Display

11.2.1. Rows Displayed

Up to 24. When tabulation bit (see Section 10) is set to 0 data packets 0 to 23 correspond to the left hand side of display rows 0 to 23. With the bit rate of Section 5, 32 character spaces are included. When the tabulation bit is set to 1, the data packet number corresponds to the first row number of a group of right hand sides of display rows. With the data rate of Section 5, the right hand sides of four display rows, each including 8 character spaces are carried by the packets. In order to preserve the integrity of packets carrying the page header, the right hand sides of rows 0 to 3 have the packet numbers X/1/1 and there is no response to packets numbered X/1/0.

11.2.2. Character Spaces in Rows 1 to 23

40, transmitted in 2 sections, each left to right

11.2.3. Character Spaces in Page Header, Row 0

32, transmitted in 2 sections, each left to right

11.3. Character Bytes

7 bits plus odd parity define a display or control character occupying a character space.

11.4. Character Sets for Display

- a) 94 alphanumeric characters plus SPACE and DELETE, see figure 3.
 - b) 63 contiguous mosaic graphics characters, plus SPACE and 32 alphanumeric characters.
 - c) 63 separated mosaic graphics characters, plus SPACE and 32 alphanumeric characters.
- See figure 4 for mosaic character set.
Selection between a), b) and c) is by means of control characters, see Section 11.5.

11.5. Control Character Set, 'spacing controls' Including Display Attributes

Set of 32 control characters, 5 unallocated for level 1, which affect the display attributes. The receiver defaults to certain attributes at the start of each row. Some control characters have effect immediately, others at the following character-space. Certain control characters have complementary forms. See figure 5.

11.5.1. Foreground Colour

White, yellow, cyan, green, magenta, red or blue. It is invoked by selection of alphanumeric or mosaic display mode, 7 pairs of control characters, see figure 5.

11.5.2. Background Colour of a Character Space - Black Background

New Background

Invoked by the control character 'black background'.

This control character causes the foreground colour then obtaining to be adopted as the background colour.

11.5.3. Contiguous Mosaic Graphics

Mosaic blocks adjoin one another.

11.5.4. Separated Mosaic Graphics

Each mosaic block is surrounded by a border of the background colour.

11.5.5. Hold Mosaic

A held mosaic character is displayed in place of a SPACE corresponding to a control character. The held character is defined only during the mosaic mode. It is the most recent character with bit 6 = 1 in its code, providing that there has been no intervening change in alphanumeric/mosaics or normal/double height display modes. It is displayed in the original contiguous or separated mode.

11.5.6. Conceal

Following characters are to be displayed as SPACE until 'revealed' by a decoder or user operation.

11.5.7. Flash

Following characters are to be displayed normally or as SPACE in alternation, under the control of a timing device in the decoder.

11.5.8. Boxing

Part of a page to be inset into the normal television picture. Protection against false operation is provided by double transmission of the control characters, with the effect taking place between them.

11.5.9. Double Height

Characters are to be stretched vertically to occupy in addition the corresponding character space in the display row with the next higher address, that row displays the same background colour as the previous row.

12. Ancilliary Text Related Data	Optional Features.
12.1. Linked Pages Related to a Given Page and Intended for Automatic Storage in the Decoder Memory	Data carried by packet X/0/27 See figure 2.
12.1.1. Clock Run-in, Framing Code and Packet Address	Bytes 1 to 5 inclusive as Sections 9 and 10.
12.1.2. Designation Code	Byte 6, 4 bits data plus 4 bits Hamming protection Codes 0000 to 0011 designate linked page function and are used repetitively as sequence labels for a number of packets X/0/27. There is no response to other codes.
12.1.3. Linked Page Addresses	Bytes 7 to 36 used as 5 groups of 6 bytes. Each group of 6 bytes defines a linked page address.
12.1.3.1. Data Group Format Defining a Linked Page	6 bytes, see figure 2 for bit sequence: Relative Magazine Number.....3 bits Page Number.....8 bits Page Sub-Code.....13 bits Hamming Protection.....24 bits NOTE There is no response to the data in byte 37.
12.2. Basic Page Check Word	Data carried by packet X/1/27.
12.2.1. Clock Run-in, Framing Code and Packet Address	Bytes 1 to 5 inclusive as Sections 9 and 10.
12.2.2. Designation Code	Byte 6, 4 bits data plus 4 bits Hamming protection. Code 0000 designates basic pagecheck word function.
12.2.3. Basic Page Check Word	Bytes 7 and 8 contain a Cyclic Redundancy Check on the data in packets X/0/0 and X/T/1 to X/T/25. For check word generation see figure 13. No respons to bytes 9 to 37.
13. Broadcasting Service Data Packet	Packet 4/1/30 transmitted approximately once per second. See figure 2.
13.1. Clock Run-in, Framing Code and Packet Address	Bytes 1 to 5 inclusive as Sections 9 and 10.
13.2. Designation Code	Byte 6, 4 bits data plus 4 bits Hamming protection. First data bit set to 0 designates multiplexed function as in Section 1.1. First data bit set to 1 designates non-multiplexed function as in Section 1.2. Data bits 2, 3 & 4 set to 0 designate functions in Sections 13.3. and 13.4. There is no response to other codes.
13.3. Program or Network Label	Bytes 7 and 8 containing 16 bits data with at least one data transition included.
13.4. Initial Teletext Page for Storage in Decoder Without User Action	Bytes 9 to 14, see figure 2 for bit sequence: Relative Magazine Number.....3 bits Page Number.....8 bits Page Sub-Code.....13 bits Hamming Protection.....24 bits
13.5. <u>Data for Equipment Control</u> <u>Includes Time and Date in</u> <u>UTC with Local Offset and</u> <u>Program Related Data</u>	Bytes 15 to 37. Where appropriate the coding is to be the common codes of the basic character set, see Sections 11.4. and figure 3. For data format see figure 12.

A-107

A-15

14. Response of Decoder at Level 2	Decoder responds as level 1 plus packets X/0/26 and X/0/28. See figure 2.																																				
14.1. Control Bits in Page Header	As level 1, see Section 11.1.																																				
14.1.1. C4 to C11	Response as level 1 see Sections 11.1.1. to 11.1.8.																																				
14.1.2. C12, C13, C14 Basic Character Set Selection	Decoder displays text using selected basic character set as follows: <table><tr><td>Alphabet</td><td>C12</td><td>C13</td><td>C14</td></tr><tr><td>1) English, US version (see figure 3)</td><td>0</td><td>0</td><td>0</td></tr><tr><td>2) To be defined</td><td>0</td><td>0</td><td>1</td></tr><tr><td>3) To be defined</td><td>0</td><td>1</td><td>0</td></tr><tr><td>4) To be defined</td><td>0</td><td>1</td><td>1</td></tr><tr><td>5) To be defined</td><td>1</td><td>0</td><td>0</td></tr><tr><td>6) See Section 14.7.</td><td>1</td><td>0</td><td>1</td></tr><tr><td>7) See Section 14.7.</td><td>1</td><td>1</td><td>0</td></tr><tr><td>8) Reserved</td><td>1</td><td>1</td><td>1</td></tr></table>	Alphabet	C12	C13	C14	1) English, US version (see figure 3)	0	0	0	2) To be defined	0	0	1	3) To be defined	0	1	0	4) To be defined	0	1	1	5) To be defined	1	0	0	6) See Section 14.7.	1	0	1	7) See Section 14.7.	1	1	0	8) Reserved	1	1	1
Alphabet	C12	C13	C14																																		
1) English, US version (see figure 3)	0	0	0																																		
2) To be defined	0	0	1																																		
3) To be defined	0	1	0																																		
4) To be defined	0	1	1																																		
5) To be defined	1	0	0																																		
6) See Section 14.7.	1	0	1																																		
7) See Section 14.7.	1	1	0																																		
8) Reserved	1	1	1																																		
14.2. Page Display																																					
14.2.1. Rows Displayed	As level 1, Section 11.2.1., exceptionally 24 complete rows, see Section 14.9.																																				
14.2.2. Character Spaces in Rows 1 to 23	As level 1, see Section 11.2.2.																																				
14.2.3. Character Spaces in Row 0 Page Header	As level 1, see Section 11.2.3.																																				
14.3. Character Bytes																																					
14.3.1. Data Packets X/0/0 to X/1/24, X/0/27 & 4/1/30	As level 1, see Sections 11.3., 12. and 13.																																				
14.3.2. Data Packets X/0/26	See Sections 14.4. and 14.6. and figure 2.																																				
14.3.3. Data Packets X/0/28	See Section 14.4. and 14.7. and figure 2.																																				
14.4. Character Sets for Display	a) Includes Full Latin Based repertoire of ISO as 7 basic alphanumeric character sets of 94 characters each plus SPACE and DELETE, selected by Control Bits as in Section 14.1.2. Each extendable by the data in packets X/0/26, see Section 14.6. and redefinable by the data in packets X/0/28, see Section 14.7. b) Contiguous mosaics as level 1, see Section 11.4. and Smoothed mosaics, see Section 14.6.16 c) Separated mosaics as level 1, see Section 11.4. and Smoothed mosaics, see Section 14.6.16. Selection between a), b) or c) is by means of control characters and the data in packets X/0/26, see Section 14.6. and the data in packets X/0/28, see Section 14.7.																																				
14.5. Control Character Set for Spacing Controls Including Display Attributes	Set of 32 control characters, 1 unallocated for level 2. Action as for level 1, see Section 11.5., except as defined in Sections 14.5.1. to 14.5.5. See also figure 5.																																				

A-108

1006

14.5.1.	Foreground Colours	As level 1 plus black, see Section 11.5.1. and figure 5.
14.5.2.	Underline Alphanumerics/ Separated Mosaic Graphics	Alphanumeric characters succeeding this control character are displayed underlined and mosaic characters are displayed in the separated mode as in Section 11.5.4. until the end of a display row of the receipt of a Cancel-Underline/ Contiguous Mosaic Graphics control character.
14.5.3.	Cancel-Underline Alpha- numerics/Contiguous Mosaic Graphics	See Section 14.5.2.
14.5.4.	Reduced Intensity	The background of alphanumeric characters and the foreground of mosaic characters are displayed at reduced intensity until the end of a display row or the second transmission of the colour control character then obtaining. <u>NOTE</u> It is recommended that this control character should reduce the displayed luminance to a subjective level approximately 50% of that obtaining in the normal intensity mode.
14.5.5.	Cancel Reduced Intensity	See Section 14.5.4.
14.6.	Character Set Extension and Non-Spacing Control Characters Including Additional Display Attributes	Uses packet X/T/26 to over write any character-space. The original character and attribute condition is the editor defined fall-back for level 1 decoders.
14.6.1.	Clock Run-in, Framing Code and Packet Address	Bytes 1 to 5, see Sections 9 and 10.
14.6.2.	Designation Code	Byte 6, 4 bits data plus 4 bits Hamming protection. Codes 0000 to 1110, with the tabulation bit T as most significant bit, as sequence codes for a number of packets X/26 upto 30. Codes T 1111 have no response.
14.6.3.	Data Groups	Bytes 7 to 36 used as 10 groups of 3 bytes each, a, b and c. See figure 2 for bit sequence. <u>a and b</u> (6 bits for display address (5 bits for mode description (5 bits Hamming protection <u>c</u> (7 bits data (1 bit odd parity Byte 37 has no response.
14.6.4.	Display Addressing	6 display address bits, as in Section 14.6.3. These provide 64 combinations. The decimal values 0 to 39 specify character spaces along a given display row and the decimal values 40 to 63 specify a particular display row. A character space is thus defined by a data group including a row address followed by one or more character position data groups.

A-109

A-109

<p>14.6.5. Full Screen Colour Including Borders Outside Normal Text Display Area (1)</p>	<p>Invoked when the Mode Description bits of any Row Address data group are set to 00000. Data bits 5, 6 and 7 activate respectively the primary colours red, green and blue. Thus, for example bit values 000 correspond to black and 110 to yellow. Data bit 4 invokes reduced intensity, bits 1 to 3 are set to 0.</p>
<p>14.6.6. Full Row Colour Including Borders Outside Normal Text Display Area (1)</p>	<p>Invoked when the Mode Description bits of the appropriate Row Address data group are set to 01000. Data bits 5, 6 and 7 activate respectively the primary colours red, green and blue. Thus, for example bit values 000 correspond to black and 110 to yellow. Data bit 4 invokes reduced intensity, bits 1 to 3 are set to 0.</p>
<p>14.6.7. Full Screen Pastel Colours Including Borders Outside Normal Text Display Area (1)</p>	<p>Invoked when the Mode Description bits of any Row Address data group are set to 00001. Data bits 1 to 3 and 5 define 16 pastel colours. Bit 4 invokes reduced intensity, see figure 8.</p>
<p>14.6.8. Full Row Pastel Colours Including Borders Outside Normal Text Display Area (1)</p>	<p>Invoked when the Mode Description bits of the appropriate Row Address data group are set to 01001. Data bits 1 to 3 and 5 define 16 pastel colours. Bit 4 invokes reduced intensity, see figure 8.</p>
<p><u>NOTE 1</u> Background colours when defined explicitly and foreground colours take precedence over Full Row colours and Full Row colours take precedence over Full Screen colours.</p>	
<p>14.6.9. Accented Characters from Supplementary Character Set</p>	<p>For display at a character-space addressed as in Section 14.6.4. The Mode Description bits set at the range of values 10000 to 11111 respectively define accents for column 4 of the code table figure 6 in ascending numerical order. The associated character from the primary character set of figure 3 is defined by the 7 data bits.</p>
<p>14.6.10. Special Characters from Supplementary Character Set</p>	<p>For display at a character-space addressed as in Section 14.6.4. The Mode Description bits are set at 01111. The 7 data bits define a character from columns 2, 3, 5, 6 or 7 from the supplementary character set of figure 6.</p>
<p>14.6.11. Alphanumerics, Normal Size with Colour and Flashing Attributes (2)</p>	<p>For normal size alphanumeric display at a character-space addressed as in Section 14.6.4. The Mode Description bits are set to 00000. Data bits 1, 2 and 3 activate respectively the foreground primary colours red, green and blue. Thus for example bit values 000 correspond to black, 110 to yellow and 111 to white. Bit 4 activates Flashing. Bits 5, 6 and 7 define the background colour in the same manner as in the case of bits 1, 2 and 3 for the foreground colour.</p>

A-110
1008

14.6.12. Alphanumerics, Double Height with Colour and Flashing Attributes (2)	As Section 14.6.11. except the Mode Description bits are set to 00001. Characters to be stretched vertically as in Section 11.5.4.
14.6.13. Alphanumerics, Double Width with Colour and Flashing Attributes (2)	As Section 14.6.11. except the Mode Description bits are set to 00010. Characters to be stretched horizontally to occupy in addition the next character-space.
14.6.14. Alphanumerics, Double Size with Colour and Flashing Attributes (2)	As Section 14.6.11. except the Mode Description bits are set to 00011. Characters to be stretched vertically and horizontally as in Sections 14.6.12. and 14.6.13.
14.6.15. Block Mosaics, Normal and Contiguous with Colour and Flashing Attributes (2)	For normal (not smoothed) mosaic display at a character-space addressed as in Section 14.6.4. The Mode Description bits are set to 00110. Data bits 1, 2 and 3 activate respectively the foreground primary colours red, green and blue. Thus for example bit values 000 correspond to black, 110 to yellow and 111 to white. Bit 4 activates Flashing. Bits 5, 6 and 7 define the background colour in the same manner as in the case of bits 1, 2 and 3 for the foreground colour.
14.6.16. Block Mosaics, Smoothed and Contiguous with Colour and Flashing Attributes (2)	As Section 14.6.15. except the Mode Description bits are set to 00111. For the smoothed mosaic graphics character set see figure 9.
14.6.17. Underline Alphanumerics or Separated Mosaics (3)	Activated at a character-space addressed as in Section 14.6.4. Invoked by the Mode Description bits set to 00110 and Data bit 1 set to 1.
14.6.18. Boxing (3)	Activated at a character-space addressed as in Section 14.6.4. Invoked by the Mode Description bits set to 00110 and Data bit 2 set to 1.
14.6.19. Conceal (3)	Activated at a character-space addressed as in Section 14.6.4. Invoked by Mode Description bits set to 00110 and data bit 3 set to 1.
14.6.20. Reduced Intensity Foreground and Background (3)	Activated at a character-space addressed as in Section 14.6.4. Invoked by Mode Description bits set to 01100 and Data bit 4 set to 1 for foreground and Data bit 5 set to 1 for background.
14.6.21. Pastel Colours in Foreground and Background and Flashing	Activated at a character-space addressed as in Section 14.6.4. Invoked by the Mode Description bits set to the range 01000 to 01011. The Mode Description bits and the Data bits define 16 foreground and background colours and the associated Flashing attribute. See figure 7.

NOTE 2 The effect of these attribute controls persists to the end of a row or until overridden by a further attribute control

NOTE 3 see page 9.

A-111

~~A-111~~

14.6.22. Termination Marker

Since more than one packet X/0/26 may be needed to display a given page, a terminator is provided by setting the Mode Description bits to 11111 in the final row address data group of the final packet X/0/26

14.6.22.1. Packet X/0/26 and X/0/28 Check Word

The two data bytes that follow a packet X/0/26 termination marker contain a Cyclic Redundancy Check on the data in packets X/0/26 and X/0/28. The process of generating the check word is identical to that of Section 12.3.3., using the data in packets X/0/26 followed by X/0/28. The sequence is completed by assuming the presence of the character SPACE (2/0) repeated as necessary. When only a packet X/0/28 carries data, only the termination marker and the C.R.C. check word will be carried by packet X/0/26.

NOTE 3 These attribute controls are mutually additive and are associated with an attribute invoked as in Sections 14.6.11 to 14.6.16. Their effect is as in NOTE 2 and they may also be overridden by a transmission of the data group with the corresponding data bit set to 0.

14.7. Basic Character Set Dynamic Redefinition

In addition to the fixed alphabets 1 to 5 listed in Section 14.1.2. the 10 blank positions in the code table of figure 3 may be redefined on a page or magazine basis using the data contained in packet X/0/28.

In the packet associated function packets X/0/28 follow packet X/0/0 of the page in transmission sequence of that magazine. In the magazine based function it may follow any packet of that magazine.

Page Header Control bits C12, C13 and C14 set respectively to 1, 0 and 1 invoke page associated function.

Page Header Control bits C12, C13 and C14 set respectively to 1, 1 and 0 invoke magazine associated function.

14.7.1. Clock Run-in, Framing Code and Packet Address

Bytes 1 to 5 inclusive, as in Sections 9 and 10.

14.7.2. Designation Code

Byte 6, 4 bits data plus 4 bits Hamming protection. Magazine associated function designated by data bits set to 0000. Page associated function designated by data bits set to 0010.

14.7.3. Data Groups

Bytes 7 to 36 used as 10 groups of 3 bytes each, a, b and c:

a and b (11 bits data
(5 bits Hamming protection)

c (4 bits data
(4 bits Hamming protection)

14.7.3.1. Character Code Table Addressing

The sequence of 10 data groups defined in Section 14.7.3. represents a sequence of 10 data words each containing 7 + 7 bits. Each word redefines one of the blank positions in the code table of figure 3, in columns, top to bottom, from position 4/0 to position 7/14 proceeding in time along the packet X/0/28.

A-112

A-110

14.7.3.2. Character Coding

The allocation of the data bits of Section 14.7.3. is as follows:

Bit 1: always set to 0.

Bits 2 to 8: represent a character from the primary set of figure 3.

Bits 9 to 14: represent a character from the supplementary set of figure 6. When this represents an accent it is combined with the character from the primary set defined by bits 2 to 8. When a special character from the supplementary set is defined, bits 2 to 8 are set to represent the character SPACE (2/0).

NOTE There is no response to byte 37 of packet X/0/28 in this mode.

14.8. Pastel Colours Dynamic Redefinition Page Associated

The 16 pastel colours of Sections 14.6.6., 14.6.7. and 14.6.21. may be redefined on a page basis using the data contained in packet X/0/28. Packets X/0/28 follow packets X/0/0 of the page in transmission sequence of that magazine.

14.8.1. Clock Run-in, Framing Code and Packet Address

Bytes 1 to 5 inclusive, as in Sections 9 and 10.

14.8.2. Designation Code

Byte 6, 4 bits data plus 4 bits Hamming protection Designated by data bits set to 0011.

14.8.3. Data Groups

Bytes 7 to 36 used as 15 groups of 11 bits data plus 5 bits Hamming protection.

14.8.4. Display Colour Coding

The sequence of 15 data groups provides 16 data words of 9 bits each. Each data word defines one of 8 possible levels respectively, of the 3 primary colours, red, green and blue. The first 8 data words in time sequence, replace group A of the colours defined in figure 7, the second 8 data words replace the colours of group B in figure 7.

NOTE There is no response to byte 37 of packet X/0/28 in this mode.

14.9. Additional Row Display

This mode of operation has been defined to accommodate the need to transmit and display pages having a non-standard format.

14.9.1. Invocation

Control bit C7 in the page header packet X/0/0 (suppress header) set to 1.

14.9.2. Response of Decoder

Displays packets X/T/1 to X/T/24 in the normal page area. For enhanced modes (see Section 14.6.4.), the address code carrying the decimal value 40 defines display row 24.

15. Response of Decoder at Level 3

Decoder responds to packets as level 2 plus additional codes in the hexadecimal range, permit a set, or a pair of co-defined sets of characters to be down loaded into the decoder. A range of colour controls can be down loaded with the characters.

15.1. Range of Colours

See Section 16.

15.2. Range of Colour Controls

See Section 16.

15.3. Full Page Application

These pages can not be acquired by level 1 and level 2 decoders.

A-113
A-24

15.3.1. Access Page Per Magazine	Page A0.
15.3.2. Page Sub-Codes	Any except 3F7F.
15.3.3. Format of Packets Carrying Page A0	As level 2.
15.3.4. Down Loading Procedure	Uses data contained in Page A0, page sub-code 3F7F, see Section 16.
15.3.5. Display Procedure	User selects magazine X, page A0, and any page sub-code except 3F7F.
15.3.5.1. Decoder Action	<p>a) If a packet X/0/0 of page A0, page sub-code 3F7F immediately follows packet X/0/0 of page A0 including the selected page sub-code, load the DRCS as in Section 16.</p> <p>b) If a) above does not apply, then await the next packet X/0/0 of page A0, page sub-code 3F7F. If the magazine associated function bit C4 in this packet is set to 1, load the DRCS as in Section 16.</p> <p>c) If the page associated function has been invoked the sequence of packets as e) below follows immediately and they are acquired.</p> <p>d) If magazine associated function has been invoked the sequence of packets as e) below follows the transmission of packet X/0/0 of page A0 with the selected page sub-code and they are acquired.</p> <p>e) The first packet X/T/26 is now transmitted. In the row address groups of these packets, bit 4 set to 1 indicates magazine associated function and set to 0 indicates page associated function. This bit has no meaning when the DRCS mode is not invoked. The mode description bits of a character space address group set to 00100 invokes the first of two or a single DRCS and set to 00101 invokes the second of two co-defined DRCS. Other Mode Description bits have the same meaning as at level 2.</p> <p>f) The data in packets X/T/1 to X/T/23 is then displayed using the DRCS for the display rows defined by packets X/T/26 as in e) above.</p> <p>g) Further packets X/T/26 may be transmitted to provide non-spacing and off display area attributes. The character-space function of packet X/T/26 is as level 2 and can overwrite the DRCS with primary or supplementary set characters. In addition to the functions as in level 2, the basic character set is invoked by transmission of the NUL accent character (4/0).</p>
15.4. Character Set Extension Using DRCS	Uses packet X/T/26 to overwrite any character position of the basic page as in level 2, but with characters from a DRCS, also a range of colour controls.
15.4.1. Down Loading Procedure	Uses data contained in page A0, page sub-code 3F7F, see Section 16.

A-114

AAR

<p>15.4.2. Display Procedure</p> <p>15.4.2.1. Decoder Action - DRCS Acquisition</p>	<p>User selects magazine X, and a page that includes DRCS characters.</p> <p>a) Following packet X/0/0 of the selected page, there follows the packets X/T/26. In the row address groups of these packets, mode bit 4 set to 1 indicates magazine associated function and set to 0 indicates page associated function. This bit has no meaning when the DRCS mode is not invoked. The character-space Mode Description bits are set to 01101 for a single DRCS or the first of two, or are set to 01110 for the second of two co-defined DRCS.</p> <p>b) If a packet X/0/0 of page A0, page sub-code 3F7F immediately follows the final packet X/T/26 of a given page and C4 is set to 0 indicating page associated function, then load the DRCS as in Section 16.</p> <p>c) If b) above does not apply and Mode bit 4 is set to 1 as in a) above, await the next packet X/0/0 of page A0, page sub-code 3F7F. If C4 in this packet is set to 1, indicating magazine associated function, load the DRCS as in Section 16.</p>
<p>15.4.2.2. Decoder Action - Display</p>	<p>A second transmission of packet X/0/0 of the selected page now precedes the transmission of packets X/T/1 to X/T/23 of that page. To overwrite using packet X/T/26 at a character-space addressed as in Section 14.6.4. The Mode Description bits are set to 01101 for a single or first of a pair of DRCS; they are set to 01110 for the second of a pair of co-defined DRCS. The 7 data bits define a character for display from the DRCS.</p>
<p>16. Dynamically Redefinable Character Sets -Down Loading Procedure</p>	<p>Carried by a page A0, page sub-code 3F7F, using packets X/0/0 to X/0/25. The sequence of packets is repeated as necessary, see Section 16.3.3.</p>
<p>16.1. Clock Run-in and Framing Code</p>	<p>See Section 9.</p>
<p>16.2. Addressing</p>	<p>Bytes 4 and 5 Hamming protected. <u>2 binary digits</u> for magazine number X. <u>1 binary digit</u> set to 0. <u>5 binary digits</u> for packet sequence numbers 0-25.</p>
<p>16.2.1. Packet Numbers X/0/0 to X/0/25</p>	
<p>16.3. Packets X/0/0</p>	
<p>16.3.1. Page Number</p>	<p>Bytes 6 and 7 Hamming protected, coded with page number A0.</p>
<p>16.3.2. Page Sub-Code</p>	<p>Bytes 8,9,10,11 Hamming protected and coded 3F7F. The included control bit C4 is set to 0 to invoke page associated function. When C4 is set to 1 magazine associated function is invoked. The included control bits C5 and C6 are set to 0. See Section 10.2.2.</p>
<p>16.3.3. Page Sequence and Colour Sequence Codes</p>	<p>Byte 12, 4 bits data and 4 bits Hamming protection.</p>
<p>16.3.3.1. Colour Sequence Code</p>	<p>Byte 12, data bit 1. When set to 0, all mode controls and colours for downloading are in the first packet X/0/0 of the sequence as in Section 16.3.4. When set to 1, the first 16 bytes of 32 are in the first packet X/0/0 as above and the second 16 bytes are in the second packet X/0/0 of the sequence as in Section 16.3.5.</p>

A-115

ANB

16.3.3.2. Page Sequence Code	Byte 12, data bits 2 to 4. The bit combinations 000 to 111 are used as sequence codes for the series of pages A0; page sub-code 3F7F.
16.3.4. Mode and Colour Data First Packet X/0/0	Bytes 13 to 34: a) Mode Controls.....2 or 3 bytes b) Colours to be Down Loaded.....0/16 bytes c) Start Control.....1 byte d) Address in Columns 2-7 of Code Table of First Character to be Down Loaded.....2 bytes
16.3.5. Colour Data Second Packet X/0/0	Bytes 13 to 30: a) Colours to be Down Loaded, second half of 32 bytes when required..16 bytes b) Address in Columns 2-7 of Code Table of Next Character to be Down Loaded.....2 bytes
16.3.5. Third and Subsequent Packets X/0/0	Bytes 13 and 14: Carry Address in Columns 2-7 of Code Table of Next Character to be Down Loaded.....2 bytes
16.4. Packets X/0/1 to X/0/25 of Sequence of Pages A0, Page Sub-Code 3F7F	Bytes 6 to 37: a) Character Data....number of bytes depends upon mode b) Character Terminate Control.....1 byte c) Subsequent Characters in numerical order completing each column, each character followed by the Character Terminate Control as in b) above..as b) d) Termination of Down Loading Control.....1 byte
16.5. <u>Character Sets Down Loadable</u>	A set, or a pair of co-definable sets of 94 characters on a 12 or 6 dot per raster line matrix, depending upon the mode selected. The matrix has 10 or 5 raster lines vertically depending upon the mode selected.
16.6. Down Loading Codes	16 standard control codes, 64 dot pattern codes, 31 DRCS mode control and instruction codes. See figure 10.
16.7. Modes	<u>Basic</u> display attributes are as for non-DRCS operation. <u>Colour</u> colour controls and colours also down loaded.
16.7.1. Basic Mode High Definition	<u>Display</u> 12 dots per raster line, nominally 10 raster lines per matrix. <u>Mode Controls</u> 6/0, 6/3 <u>Character Data</u> 2 bytes per raster line. First byte specifies even numbered dots (0 to 10). Second byte specifies odd numbered dots (1 to 11). The code bits b1, b2, b3, b4, b5 and b7 correspond directly to the dot pattern. Each complete matrix is terminated by the code 7/4.

A-116

A-117

16.7.2. Basic Mode
Low Definition

Display 12 dots per raster line, defined in pairs [(0,1) to (10,11)], nominally 10 raster lines per matrix. Two low definition sets may be co-defined.

Mode Controls Single low definition set or first of a pair of co-defined sets 6/0, 6/2, 6/4. Second of a pair of co-defined sets 6/0, 6/2, 6/5.

Character Data 1 byte per raster line. Each bit specifies a pair of dots. Each complete matrix is terminated by the code 7/4.

This mode is the fallback for decoders having only 6 dot DRCS capability.

16.7.3. Colour Mode

1 value of horizontal definition, 12 dots per raster line defined in pairs.
2 values of vertical definition, 10 raster lines per matrix for high definition or 5 raster lines per matrix for low definition.
2 methods of colour control, red, green and blue primary colours with two levels of intensity (see Section 16.7.3.1.) or 16 down loaded specified colours (see Section 16.7.3.2.).

16.7.3.1. Colour Using Three Primary Colours

Display 12 dots per raster line, defined in pairs as in Section 16.7.2. Activation of red, green and blue with normal or reduced intensity.

Mode Control high definition 6/1, 6/3, 6/6.
low definition 6/1, 6/2, 6/6.

Character Data Dot patterns for complete matrix transmitted respectively for red, green, blue and intensity, i.e. four patterns for each complete matrix.

The transmissions for red, green, blue and intensity are respectively preceded by one of the delimiter codes 7/0, 7/1, 7/2 or 7/3. Only those required are transmitted and the complete matrix is terminated by the control code 7/4.

16.7.3.2. Colour Using 16 Down Loaded Colours

Display 12 dots per raster line, defined in pairs as in Section 16.7.2. any one of 16 colours may be associated with any dot pair. For colour down loading procedure see Sections 16.7.3.3. and 16.7.3.4.

Mode Controls high definition 6/1, 6/3 and 6/7 or 6/8, see Section 16.7.3.3. and 16.7.3.4.
low definition 6/1, 6/2 and 6/7 or 6/8, see Section 16.7.3.3. and 16.7.3.4.

Character Data Dot patterns for the complete matrix transmitted 4 times. The resultant 4 bits associated with each dot pair will thus have values in the range 0000 to 1111 in order to define one of the 16 colours. The transmissions define the 4 bits in order of decreasing significance and are preceded respectively by the delimiter codes 7/0, 7/1, 7/2 and 7/3. The complete transmission of the matrix is terminated by the control 7/4.

A-117

A-65

16.7.3.3. Colour Down Loading 16 Colours from a Set of 64	<p><u>Display</u> Each colour is defined by 1 of 4 levels of red, green and blue primary colours.</p> <p><u>Mode Controls</u> as Section 16.7.3.2. using the codes 6/1, 6/3 and 6/7.</p> <p><u>Colour Data</u> 16 groups of 6 bits define 1 of 4 levels for respectively red, green and blue primary colours. Bits b1, b2, b3, b4, b5 and b7 of the codes in figure 10 are used. The sequence of 16 groups of 6 bits correspond to the colours invoked in Section 16.7.3.2.</p>
16.7.3.4. Colour Down Loading 16 Colours from a Set of 4096	<p><u>Display</u> Each colour is defined by 1 of 16 levels of red, green and blue primary colours.</p> <p><u>Mode Controls</u> as Section 16.7.3.2. using the codes 6/1, 6/3 and 6/8.</p> <p><u>Colour Data</u> 16 groups of 12 bits define 1 of 16 levels for respectively red, green and blue primary colours. Bits b1, b2, b3, b4, b5 and b7 of the codes in figure 10 are used twice for each group. The sequence of 16 groups of 12 bits correspond to the colours invoked in Section 16.7.3.2.</p>
17. Response of Decoder at Level 4 Alphageometric Coding	Page addresses in the range A1 to FF and associated page sub-codes are reserved for this function. To be implemented when the coding details are specified. (1)
18. Response of Decoder at Level 5 Alphaphotographic Coding	Page addresses in the range A1 to FF and associated page sub-codes are reserved for this function. To be implemented when the coding details are specified. (1)
19. <u>Telesoftware</u> Transmission of Computer Programs and Similar Data Not For Display. Applicable to a Range of Levels to be Associated with Those Defined for Text and Similar Display.	Page addresses in the range A1 to FF and associated page sub-codes are reserved for this fuction. To be implemented when details are specified. (1)
<p><u>NOTE 1</u> These digits are in the hexadecimal range.</p>	

A-118

Art 16

FORMAT OF PACKETS X/0/26 X/0/27 X/0/28 4/1/30

Packets X/0/26 - X/0/28	Clock Run-in	Clock Run-in	Framing Code	Magazine Tabulation and Packet Address	Design- ation Code	First Three or Six Byte Data Group	
-------------------------------	-----------------	-----------------	-----------------	--	--------------------------	---------------------------------------	--

Packet X/0/26	PMPMPMPM 12132345 P5 is add parity bit 1st byte	PPA P A A P 12132345	A A m m m m P 56123454	DDDDDDDD P	Data odd parity	Ten Three Byte Groups in Each Packet	A = Address m = Mode P = Hamming
------------------	---	-------------------------	---------------------------	------------	--------------------	---	--

Packet X/0/28	Oppppppp	sspppppp	PSPSPSPs	Ten Three Byte Data Groups in Each Packet	0 = Bit always set to 0 p = Primary Set Character P = Protection Bits s = Supplementary Set Character
------------------	----------	----------	----------	--	--

Packet X/0/27	Six bytes containing Relative Magazine Number, Page Number and Page Sub-Code. For bit sequence see NOTE	Five Groups of Six Bytes Each in Each Packet	When Tabulation bit is set to 1 and designation code to 0000 bytes 7 & 8 are a basic page check word
------------------	---	---	---

Packet X/1/30	Framing Code	Magazine Tabulation and Packet Address	Design- ation Code	Programme or Network Label	One 6 byte Group Coded as packet X/0/27	Equipment Control Group Bytes 15 to 37
------------------	-----------------	--	--------------------------	-------------------------------	---	---

NOTE Page Number and Page Sub-Code have the same format as bytes 6 to 11 of the Page Header (see figure 1), packet X/0/0. The bits C4, C5 and C6 in this sequence are used to change the magazine number from that in bytes 4 and 5 of the packet X/0/27. Setting any of these bits to 1 complements the corresponding magazine number bit. In all cases the LEAST SIGNIFICANT bit is transmitted first.

A-120
AKB

	2	3	4	5	6	7
0	SP	0	(1)	P	(1)	p
1	!	1	A	Q	a	q
2	"	2	B	R	b	r
3	#	3	C	S	c	s
4	\$	4	D	T	d	t
5	%	5	E	U	e	u
6	&	6	F	V	f	v
7	'	7	G	W	g	w
8	(	8	H	X	h	x
9	)	9	I	Y	i	y
10	*	:	J	Z	j	z
11	+	;	K	(1)	k	(1)
12	,	<	L	(1)	l	(1)
13	-	=	M	(1)	m	(1)
14	.	>	N	(1)	n	(1)
15	/	?	O	_	o	DEL

Figure 3

PRIMARY CHARACTER SET, COMMON CHARACTERS

(1) National Option variation, see Table on following page.

For 7 bit coding, bits 1-4 define row in ascending order and bits 5-7 define columns in ascending order.

A-121
At 99

TABLE POSITION	ENGLISH U.S. USE
4/0	e
5/11	[
5/12	\
5/13]
5/14	^
6/0	.
7/11	{
7/12	|
7/13	}
7/14	~

Figure 3 continued

PRIMARY CHARACTER SET, NATIONAL OPTION
FOR U.S. USE.

A-122

A-122

	2	3	6	7
0	oo oo oo	oo oo +o	oo oo o+	oo oo ++
1	+o oo oo	+o oo +o	+o oo o+	+o oo ++
2	o+ oo oo	o+ oo +o	o+ oo o+	o+ oo ++
3	++ oo oo	++ oo +o	++ oo o+	++ oo ++
4	oo +o oo	oo +o +o	oo +o o+	oo +o ++
5	+o +o oo	+o +o +o	+o +o o+	+o +o ++
6	o+ +o oo	o+ +o +o	o+ +o o+	o+ +o ++
7	++ +o oo	++ +o +o	++ +o o+	++ +o ++
8	oo o+ oo	oo o+ +o	oo o+ o+	oo o+ ++
9	+o +o oo	+o +o +o	+o +o o+	+o +o ++
10	o+ o+ oo	o+ o+ +o	o+ o+ o+	o+ o+ ++
11	++ +o oo	++ +o +o	++ +o o+	++ +o ++
12	oo ++ oo	oo ++ +o	oo ++ o+	oo ++ ++
13	+o ++ oo	+o ++ +o	+o ++ o+	+o ++ ++
14	o+ ++ oo	o+ ++ +o	o+ ++ o+	o+ ++ ++
15	++ ++ oo	++ ++ +o	++ ++ o+	++ ++ ++

Figure 4

MOSAIC GRAPHIC CHARACTER SET

o= Background Colour

+ = Foreground Colour

In the Mosaic Graphics Mode the Alphanumeric Characters from the Code Table of Figure 3 are included in Columns 4 & 5. Bit allocation is as figure 3.

A-123

224

	0	1
0	(4)	(4)
1	Alpha Red	Mosaic Red
2	Alpha Green	Mosaic Green
3	Alpha Yellow	Mosaic Yellow
4	Alpha Blue	Mosaic Blue
5	Alpha Magenta	Mosaic Magenta
6	Alpha Cyan	Mosaic Cyan
7	Alpha White ⁽¹⁾	Mosaic White
8	Flash	Conceal ⁽²⁾
9	Steady ⁽¹⁾ (2)	Contig ⁽¹⁾ Mosaic ⁽²⁾
10	End ⁽¹⁾ Box ⁽²⁾	Separ Mosaic
11	Start ⁽³⁾ Box	(5)
12	Norm ⁽¹⁾ Hght ⁽²⁾	Blk ⁽¹⁾ Bkgd ⁽²⁾
13	Dble Hght	New Bkgd ⁽²⁾
14	(4)	Hold Mosaic ⁽²⁾
15	(4)	Release ⁽¹⁾ Mosaic

TABLE POSITION	
0/	
0/	Reduced Intensity
1/0	Mosaic Black
1/9	Underline Stop & Contig Mo
1/10	Underline Start & Sep Mos

- (1) Presumed at the start of each row.
- (2) Action 'Set At', others are 'Set After'.
- (3) Two consecutive codes are transmitted, action takes place between them.
- (4) No action at level 1.
- (5) No action at level 1 or 2.

Figure 5
CONTROL CHARACTER SET FOR
SPACING ATTRIBUTES

A-125
A22

	2	3	4	5	6	7
0		°		—	h	h
1	i	±	✓	1	Æ	æ
2	¢	²	✓	®	ð	ð
3	£	³	^	©	ª	
4	\$	X	~	™	¶	¶
5	¥	u	—	♫		ℓ
6	≠	π	∪	ℓ ⁿ	∩	∩
7	§	.	.		ℓ	ℓ
8	¤	÷	∴		ℓ	ℓ
9	'	'			ø	ø
10	“	”	°		œ	œ
11	<<	>>	∩		°	ß
12	←	¼		1/8	ℓ	ℓ
13	↑	½	”	3/8	ℓ	ℓ
14	→	¾	ℓ	5/8	η	η
15	↓	ℓ	✓	7/8	η	

Figure 6

SUPPLEMENTARY CHARACTER SET

Column 4 contains accents to be associated with characters from the Primary Character Set of figure 3.

Bit allocations are as figure 3

- (1) This character represents the European Currency Unit and is proposed for inclusion at position 5/6.

The European Broadcasting Union has proposed that °/oo (per mil) be included. No position in the code table has been allocated.

A-126

A-223

MODE BITS	FOREGROUND COLOUR GROUP	BACKGROUND COLOUR GROUP
01000	A	A
01001	A	B
01010	B	B
01011	B	A

DATA BITS			COLOUR REFERENCE NUMBER
b7	b6	b5	
b3	b2	b1	
0	0	0	1 A or B
0	0	1	2 A or B
0	1	0	3 A or B
0	1	1	4 A or B
1	0	0	5 A or B
1	0	1	6 A or B
1	1	0	7 A or B
1	1	1	8 A or B
			16 colours in all

The chromaticities of the colours are to be defined.

Bits b7, b6, b5 define the background colour
Bits b3, b2, b1 define the foreground colour
Bit b4 invokes flashing

Figure 7

INVOCATION OF PASTEL COLOURS IN FOREGROUND
AND BACKGROUND

b5	b3	b2	b1	COLOUR REFERENCE NUMBER
0 = GROUP A	0	0	0	1 A or B
1 = GROUP B	0	0	1	2 A or B
	0	1	0	3 A or B
	0	1	1	4 A or B
	1	0	0	5 A or B
	1	0	1	6 A or B
	1	1	0	7 A or B
	1	1	1	8 A or B

The chromaticities of the colours are to be defined,
but shall be the same as those of figure 7.
Bit b4 invokes reduced intensity.

Figure 8

INVOCATION OF PASTEL COLOURS FOR FULL SCREEN AND FULL ROW ATTRIBUTES

A-127

A-124
































	6	7
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

Figure 9 SMOOTHED MOSAIC GRAPHICS SET

Columns 2, 3, 4, & 5 are unallocated and the position 7/15 corresponds to the character DEL. The character in position 6/15 invokes the illumination of alternate dots of a mosaic rectangle.

The horizontal component of the characters in positions 4/14 and 5/14 are invoked by the Separated Mosaic/Underline Alphanumeric Mode.

A-128

AAJBY

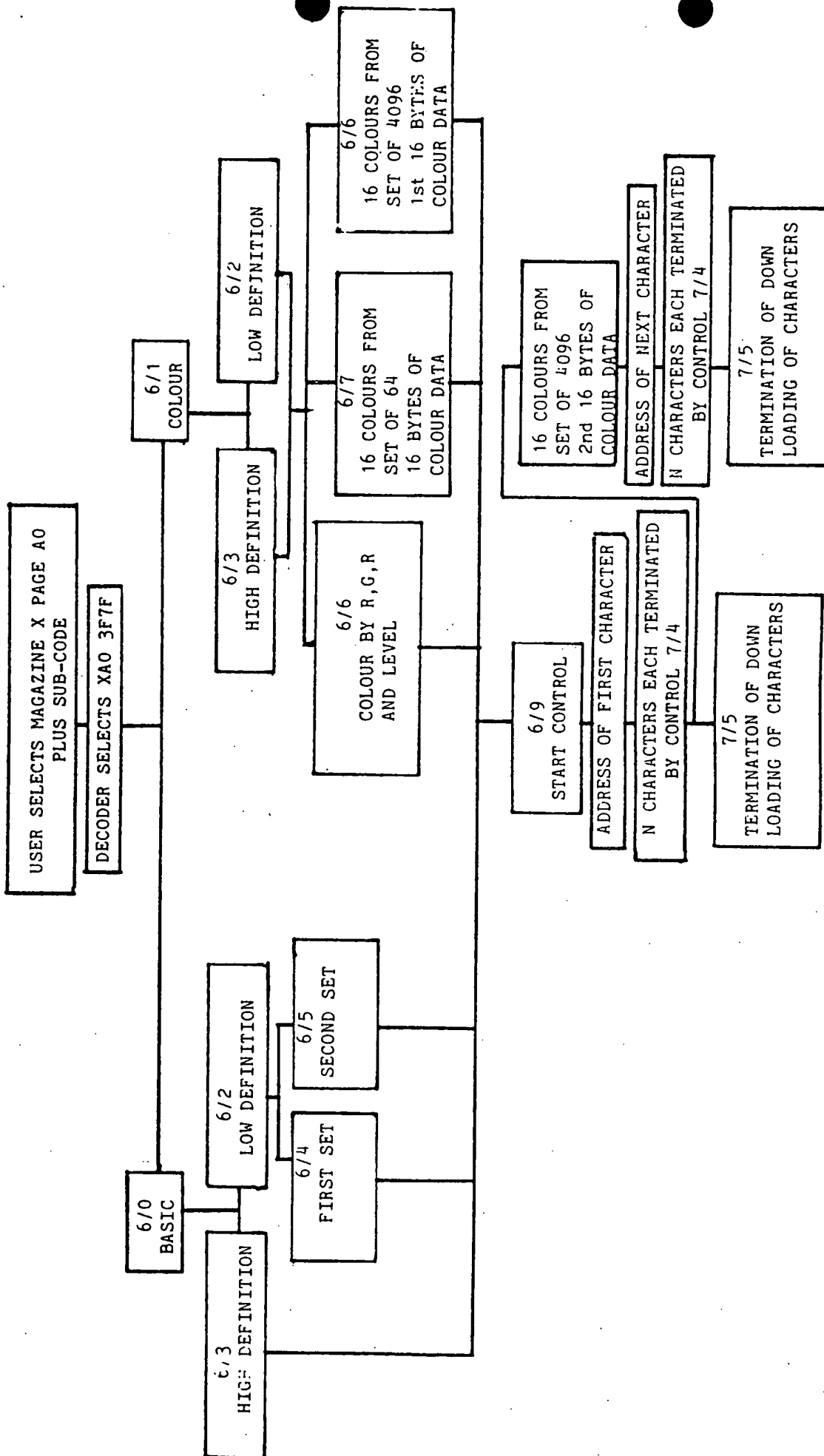


Figure 10

DOWN LOADING PROCEDURE FOR DRCS

A-129
A-129

	0 & 1	2-5	6	7
0	(1)	(2)	BASIC MODE	COLOUR DELIMITER 1
1	(1)	(2)	COLOUR MODE	COLOUR DELIMITER 2
2	(1)	(2)	LOW DEFINITION	COLOUR DELIMITER 3
3	(1)	(2)	HIGH DEFINITION	COLOUR DELIMITER 4
4	(1)	(2)	FIRST SET	TERMINATE CHARACTER
5	(1)	(2)	SECOND SET	TERMINATE DOWN LOADING
6	(1)	(2)	COLOUR BY R,G,B & Lev.	(3)
7	(1)	(2)	16 COLOURS FROM 64	(3)
8	(1)	(2)	16 COLOURS FROM 4096	(4)
9	(1)	(2)	START CONTROL	(4)
10	(1)	(2)	(3)	(4)
11	(1)	(2)	(3)	(4)
12	(1)	(2)	(3)	(4)
13	(1)	(2)	(3)	(4)
14	(1)	(2)	(3)	(4)
15	(1)	(2)	(3)	(4)

- (1) These columns reserved for standard control characters
- (2) These columns contain character and colour codes for down loading
- (3) These codes are reserved for future standardisation
- (4) These codes are reserved for use in the Videotex service

For 7 bit coding, bits 1-4 define rows in ascending order
and bits 5-7 define columns in ascending order.

Figure 11
CONTROL CODES FOR DRCS DOWN LOADING PROCEDURE

A-130
A-227

Broadcast Service Data Packet Byte	Function	Bit Allocation
15 Local Time Zone	Undefined. Polarity, set to 1 when behind UTC (eg USA). Magnitude of offset from UTC in units of $\frac{1}{2}$ hour. Undefined	Bit 1 Bit 2 Bits 3 - 7
16 Year Type and Day (1)	Set at 1 when this year or next year is leap year. Set at 1 when this year or last year is leap year. January 1st day of week. UTC day of week.	Bit 8 Bit 1 Bit 2 Bits 3 - 5 Bits 6 - 8
17 Week	Undefined. Week Number 1 to 53 according to ISO 2015.	Bits 1 and 2 Bits 3 - 8
18 Hours	Undefined. UTC Hours 10's. UTC Hours units.	Bits 1 and 2 Bits 3 and 4 Bits 5 - 8
19 Minutes	Undefined. UTC Minutes 10's. UTC Minutes units.	Bit 1 Bits 2 - 4 Bits 5 - 8
20 Seconds	Set to 1 during minute containing a leap second. UTC Seconds 10's. UTC Seconds units.	Bit 1 Bits 2 - 4 Bits 5 - 8

Figure 12 Time and Date Coding for Broadcast Data Packet

NOTE 1

Days of the week are numbered from Monday = 1 to Sunday = 7

A given packet time signal indicates the time at the occurrence of the next such packet.

A-131

[Handwritten signature]

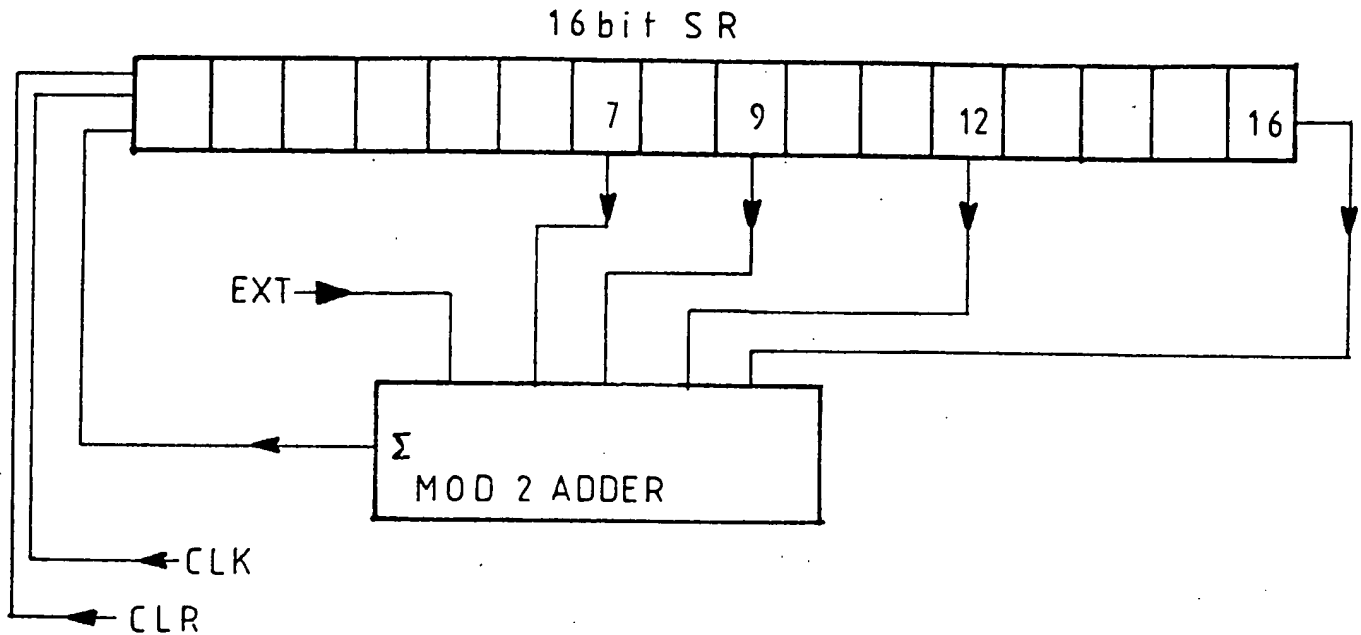


Figure 13

CHECK WORD GENERATION

In the example shown a 16 bit shift register has as input the modulo-2 sum of an external input and the contents of the 7th, 9th, 12th and 16th stages of the register. Initially the register is cleared to 'all zeros'. During a sequence of 8192 clock pulses the first 24 character bytes (192 bits) of the page header packet and the following character bytes of packets numbers with Y up to 25, in conventional transmission order form the external input. Any absent packets are considered to contain the character SPACE (2/0) throughout. At the end of this process the contents of the register are the Basic Page Check Word and it is transmitted along the register beginning with the bit held in the 16th stage.

A-132

Handwritten signature

DESIGNATION CODE	FUNCTION	DATA BITS							
		1	2	3	5	6	7	4	
ROW GROUP 00000	FULL SCREEN COLOUR	No Response			Red	Green	Blue	Reduced Intensity	
ROW GROUP 00001	FULL SCREEN PASTEL COLOURS	16 Pastel Colours						Reduced Intensity	
ROW GROUP 00100	NO RESPONSE								
ROW GROUP 00101	NO RESPONSE								
ROW GROUP 01000	FULL ROW COLOUR	No Response			Red	Green	Blue	Reduced Intensity	
ROW GROUP 01001	FULL ROW PASTEL COLOURS	16 Pastel Colours						Reduced Intensity	
ROW GROUP 01100	NO RESPONSE								
ROW GROUP 01101	NO RESPONSE								
ROW GROUP 10000	NO RESPONSE								
ROW GROUP 10001	NO RESPONSE								
ROW GROUP 10100	NO RESPONSE								
ROW GROUP 10101	NO RESPONSE								
ROW GROUP 11000	NO RESPONSE								
ROW GROUP 11001	NO RESPONSE								
ROW GROUP 11100	NO RESPONSE								
ROW GROUP 11101	NO RESPONSE								
ROW GROUP 11111	PACKETS 26 TERMINATOR	This code is followed by a 2 byte check digit on the data in packets "26" and packets "28".							
ROW GROUP XXX1X	DRCS MAGAZINE ASSOCIATED	The value of bit 4 in the designation code only applies when in the DRCS Mode, except for group 11111 above.							

Figure 14 PACKETS "26" DESIGNATION CODES ALLOCATION
ROW ADDRESS GROUPS

A-133

A-133

DESIGNATION CODE	FUNCTION	DATA BITS 1 TO 7 INCLUSIVE
SPACE GROUP 00000	ALPHANUMERIC NORMAL	BITS 1, 2 & 3 respectively RED, GREEN & BLUE FOREGROUND BITS 5, 5 & 7 respectively RED, GREEN & BLUE BACKGROUND BIT 4 FLASHING
SPACE GROUP 00001	ALPHANUMERIC x 2 HEIGHT	
SPACE GROUP 00010	ALPHANUMERIC x 2 WIDTH	
SPACE GROUP 00011	ALPHANUMERIC x 2 SIZE	
SPACE GROUP 00100	1st DRCS LATCHING SHIFT	
SPACE GROUP 00101	2nd DRCS LATCHING SHIFT	
SPACE GROUP 00110	MOSAIC NORMAL	BITS 1 to 7 inclusive with the 4 Designation Codes define 16 foreground and background colours
SPACE GROUP 00111	MOSAIC SMOOTHED	
SPACE GROUP 01000 TO SPACE GROUP 01011	PASTEL COLOURS 4 CODES	
SPACE GROUP 01100	NON-SPACING ATTRIBUTES	
SPACE GROUP 01101	1st DRCS SINGLE SHIFT	
SPACE GROUP 01110	2nd DRCS SINGLE SHIFT	
SPACE GROUP 01111	SPECIAL CHARACTER FROM SUPPLEMENTARY SET	BITS 1 TO 7 INCLUSIVE DEFINE THE SUPPLEMENTARY SET CHARACTER
SPACE GROUP 10000 TO SPACE GROUP 11111	ACCENTS FROM SUPPLEMENTARY SET	BITS 1 TO 7 INCLUSIVE DEFINE THE ASSOCIATED PRIMARY SET CHARACTER

Figure 15 PACKETS "26" DESIGNATION CODES ALLOCATION
CHARACTER-SPACE ADDRESS GROUP

A-134

A-134

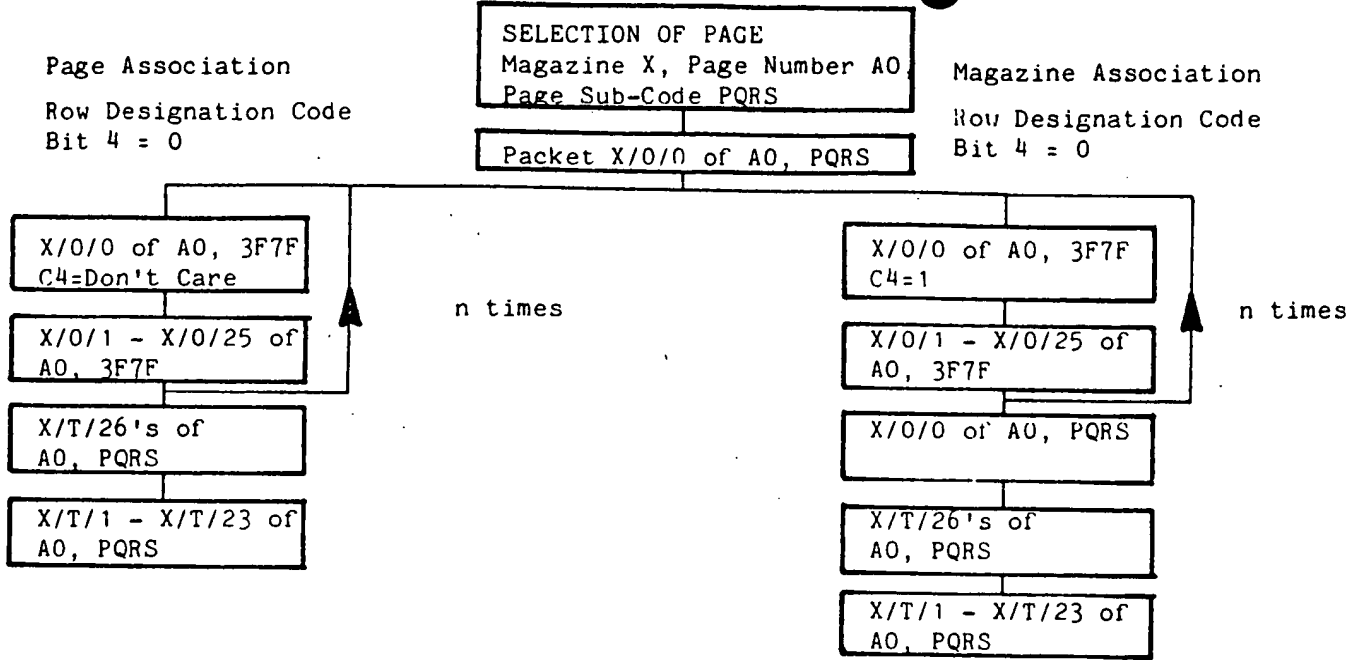


Figure 31 FULL PAGE DRCS DISPLAY PROCEDURE

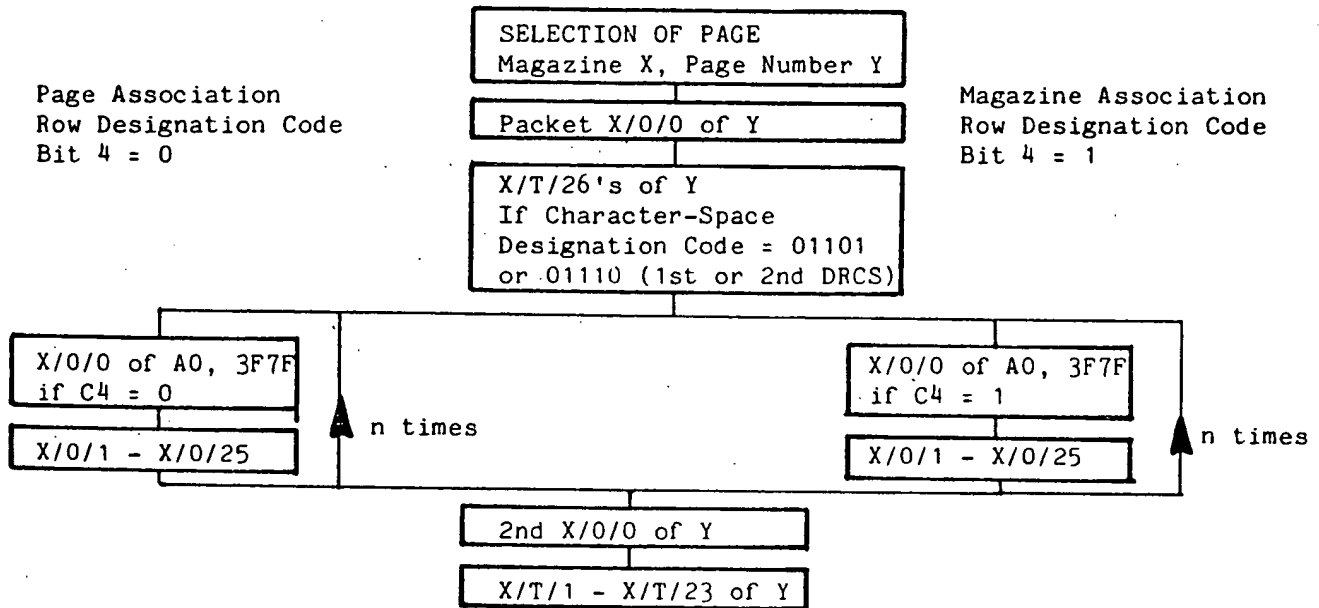


Figure 32 DRCS TO OVERWRITE BASIC PAGE

A-135

A-92

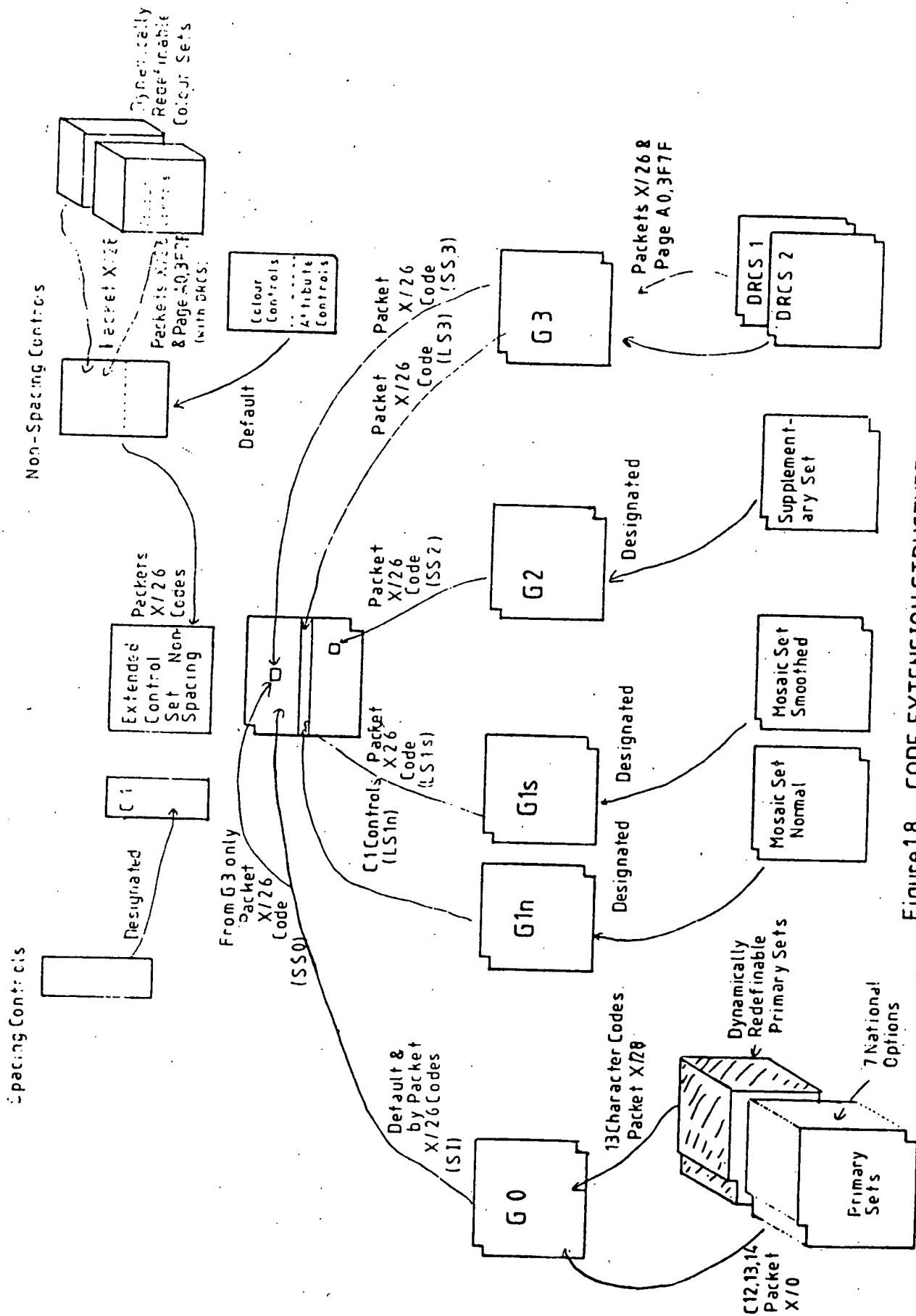


Figure 18 CODE EXTENSION STRUCTURE

A-136

AA 38

x

APPENDIX VIII:["discrete signals" of "standardized" Teletext
(exemplified)]

The publication contained within "Appendix VII" of this Office action, has been cited because it exemplifies "standardized" Teletext form/practice. The following is noted:

1) As was notoriously well known in the art, on the transmitter side of a Teletext system, a Teletext editor generated the respective Teletext images/frames that were to be transmitted. Each of these images/frames was then encoded into a "series of instructions" which "series of instructions", when transmitted and selectively received at the receiver side of the system, was used by the decoder/receiver to locally generate/re-generate the respective Teletext image/frame for display thereat.⁵³

2) As was notoriously well known in the art, in order to transmit the series of instructions, each series of instructions was first organized into a Teletext "page" format, wherein each formatted "page" was comprised of a plurality of "discrete Teletext packet signals". In the illustrated system of APPENDIX VI, each Teletext "page" included the twenty-eight "discrete Teletext packet signals" having the structure shown on pages "A-17" and "A-18" of said Appendix VI, wherein:

A) The first packet of each "page", e.g. packet "X/0/0" on page "A-17", was a header packet which carried various types of control signals associated with the respective "page";

B) The next twenty-four packets of each "page", e.g. packets "X/T/1" to "X/T/23" on page "A-17", were information packets each included various sync and address codes along with a 32 character byte information carrying portion for carrying a 32 byte "discrete portion" of the respective "series of instructions" of the respective Teletext image/frame; and

C) At least one of the remaining packets of each "page", e.g. packet 4/1/30, was an extension packet which, in the illustrated system, was used to convey:

⁵³ Note "APPENDIX E" attached hereto

1. Twenty-three bytes of an "equipment control group" for allowing the remote control/triggering/actuation of downstream network equipment(s);⁵⁴

[SEE: the paragraph which begins "Optional features..." on the page labeled "A-1" of the publication; and "Equipment Control" in packet 4/1/30 on page labeled "A-18" of the publication]

2. A program/network label portions for allowing downstream equipment/receivers to identify the program/network being transmitted on the given channel currently being received

[SEE: figure 12 on the page labeled "A-28" of the publication; and "Program or Network Label" in packet 4/1/30 on page labeled "A-18" of the publication]

3. ETC,...

3) As was notoriously well known in the art, so formatted Teletext "pages" were the communicated through the television network:

A) By embedding each "discrete Teletext packet signal" of each page within a respective vacant line period of the TV programming being distributed by the TV network;

B) By communicating the television programming containing the embedded "discrete Teletext packet signals" through the network to a plurality of receiver stations;

C) By separating the embedded "discrete Teletext packet signals" from the communicated programming at each of the receiver stations;

D) By determining which ones of the separated "discrete Teletext packet signals" correspond to information packets of a desired Teletext page;

⁵⁴ While this document does not list the kind of downstream equipment that was to be controlled by this signal "group", the kind of equipment that could be controlled was in fact notoriously well known in the art [note "APPENDIX VIII" attached hereto].

E) By decoding those information packets of the desired Teletext page so as to obtain/recover the respective 32 byte information portions therefrom;

F) By organizing the obtained 32 byte portion back into the original sequence of instructions;

G) By executing the organized sequence of instructions so as to "locally generate" the desired Teletext image for display at the receiver station.

More specifically, with respect to the exemplified system:

A) Each transmitted Teletext image was represented by a series of instructions up to 768 character bytes long;

B) Because each vacant line period of a TV signal did not have the capacity/bandwidth to carry all 768 character bytes at one time, each series of instructions had to be divided up into a plurality of discrete portions/segments which could be carried within a respective plurality of vacant line periods. Specifically, each of the 768 bytes of each series was divided up into 24 portions/segments/rows which were 32 character bytes long (i.e. $24 \times 32 = 768$), and each of these so produced 24 portions/segments/rows was then inserted into a vacant line of a TV signal via a respective one of the 24 information bearing packets "X/T/1" to "X/T/23" shown on page "A-17" of Appendix VI;

C) On the receiver side of the system: said information bearing packets "X/T/1" to "X/T/23" of a desired/selected Teletext page were then identified and decoded by a Teletext decoder so as to recover the respective discrete 32 byte portions/segments therefrom; these obtained 32 byte portions/segments were then organized/re-organized back into the original 768 byte "series of instructions" and stored in a display memory; and finally, this stored series of instructions was outputted from the display memory in order to instruct a character generator to "locally generate" the desired Teletext image that was to be locally displayed;

4) As was notoriously well known in the art, "series of instructions" representing non-displayable types of data/information, e.g. such as computer software (e.g. "Telesoftware"), were also be formatted into standardized Teletext "pages" and communicated through a TV network in a like manner; e.g. "extended Teletext"⁵⁵. As exemplified by the system of Appendix A, it was explicitly recognized that the information packets "X/T/1" to "X/T/23" of given pages could be used to carry 32 byte "portions"/segments software (e.g. "Telesoftware") in place of the 32 byte "portions"/segments of data which represented displayable Teletext images/frames [SEE: the paragraph which begins "Page addresses have also been reserved for the transmission of Telesoftware..." on page "A-1" of the publication; and section "19." on page "A-16" of the publication; etc,...]. And unless the Telesoftware program comprised less than the 30-40 bytes that could be carried within one vacant TV line, e.g. it being rather doubtful that any computer program would/could be so short, the Telesoftware program was necessarily broken up into a plurality of discrete 30-40 bytes portions to be carried within a respective plurality of the discrete information packets too (e.g. in the same way as the character/graphic instructions were broken up and carried by said information packets as addressed above)⁵⁶. Again, for applicant to suggest that Telesoftware/Teletext was not transmitted as a plurality of discrete signal portion/packets that had to be "organized"/re-organized back into a complete instruction sets on the receiver side, is simply founded in an unrealistically low level of skill in the art. Such arguments represent nothing less than a huge misunderstanding and/or misrepresentation of Teletext "prior art".

⁵⁵ Note the discussion in the first 12 lines under the heading "ORACLE and TV Transmission System" which begins in the last 6 lines of the second column on page 561 of the Hedger publication entitled "TELESOFTWARE-VALUE ADDED TELETEXT"].

⁵⁶ Indeed, Telesoftware programs were often so long that they had to be divided up into discrete 30-40 byte portions filling not just one page but a plurality of "linked" Teletext pages [note the first 6 lines on page 562 of the Hedger publication entitled "TELESOFTWARE-VALUE ADDED TELETEXT"]